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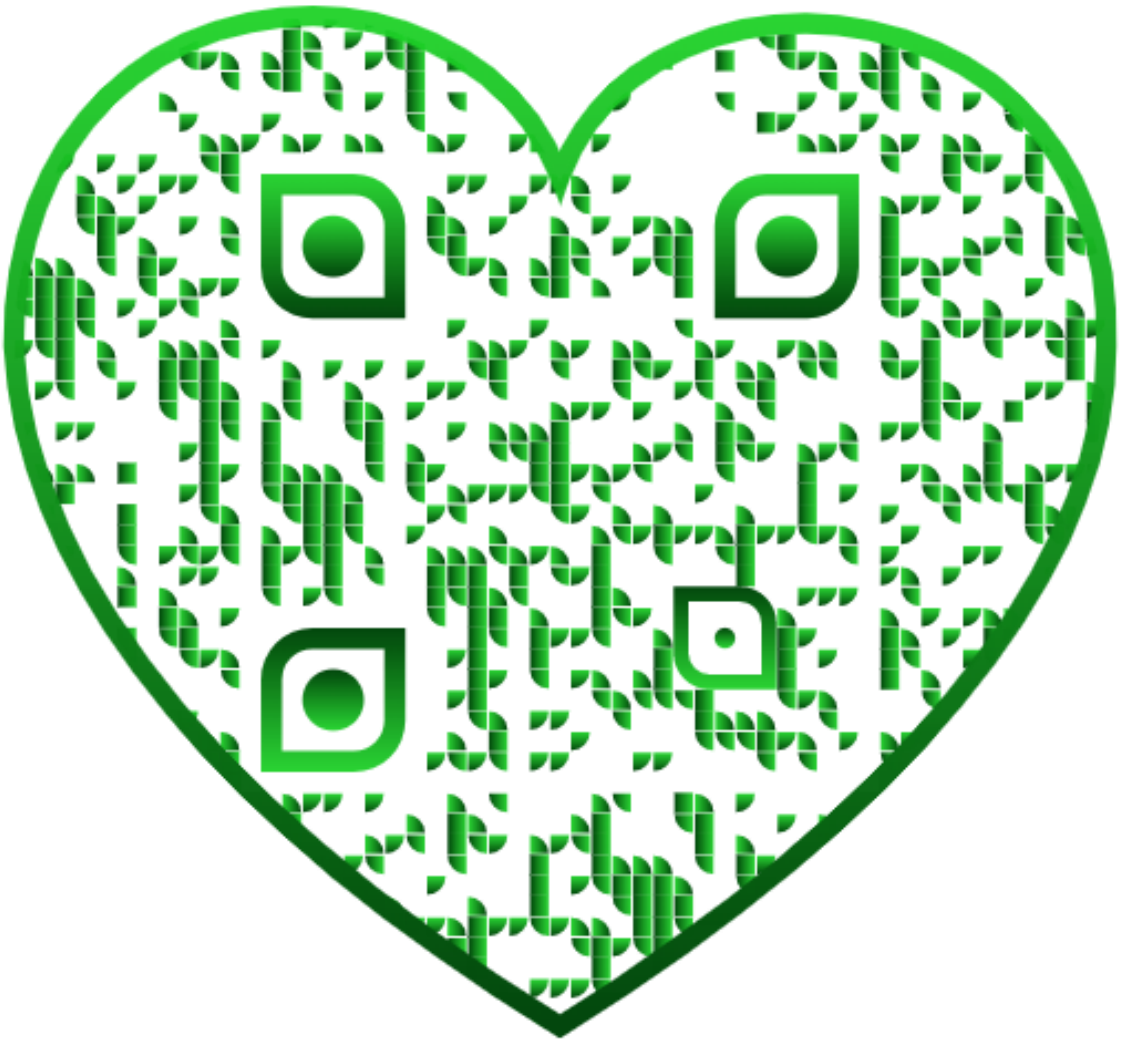

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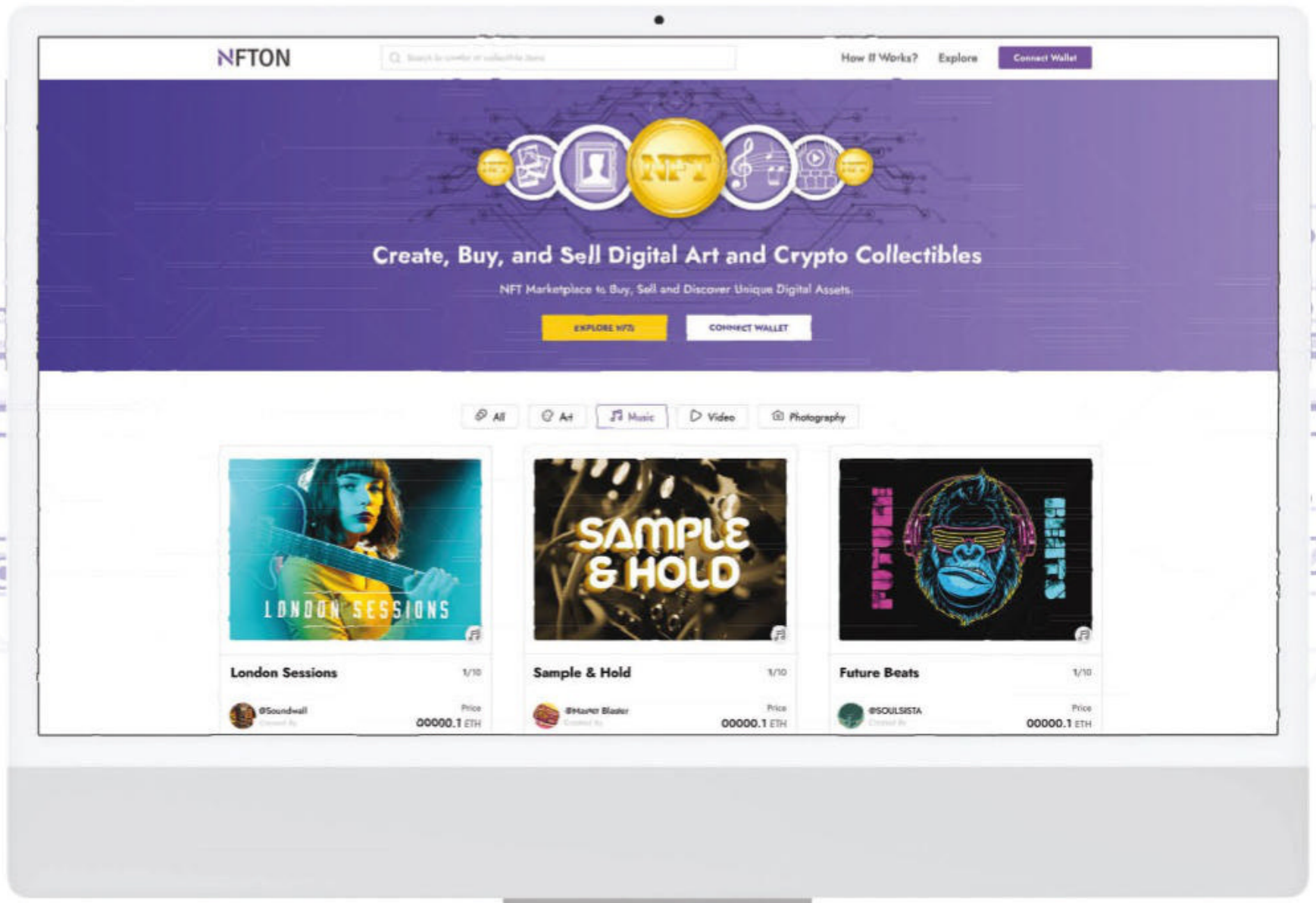

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Printed in the UK by: William Gibbons & Sons Ltd on behalf of Future
Distributed in the UK by: Marketforce (UK), 2nd Floor, 5 Churchill Place, Canary Wharf, London, E14 5HU **Tel:** +44 (0) 203 787 9001

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Future Music, ISSN 0967-0378 November issue 376, is published monthly with an extra issue in December by Future Publishing, Quay House, The Ambury, Bath, BA1 1UA. UK

The US annual subscription price is $197.60. Airfreight and mailing in the USA by agent named World Container Inc, c/o BBT, 150-15 183rd St, Jamaica, NY 11413, USA. Application to Mail at Periodicals Postage Prices is Pending at Brooklyn NY 11256.
US POSTMASTER: Send address changes to *Future Music*, World Container Inc, c/o BBT, 150-15 183rd St, Jamaica, NY 11413, USA

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Ready for release

There's no doubt that some of us are better at finishing projects than others. You might be one of the lucky ones who finds it easy to kick off a new musical endeavour and smoothly see it through to completion without any hiccups. For many of us though, there are regular roadblocks – whether that involves stifled creativity, a short attention span or a crushing impulse toward perfectionism.

However you handle the creative process, our cover feature aims to help streamline things. We're not going to tell you exactly what sort of music you should be writing, or exactly how to go about it, but we are aiming to help provide some structure, with manageable goals, workflow tips and creative advice, to help you write, mix and release a whole EP before the next issue of FM arrives!

We hope you enjoy the issue.

Si Truss, Editor-In-Chief
simon.truss@futurenet.com

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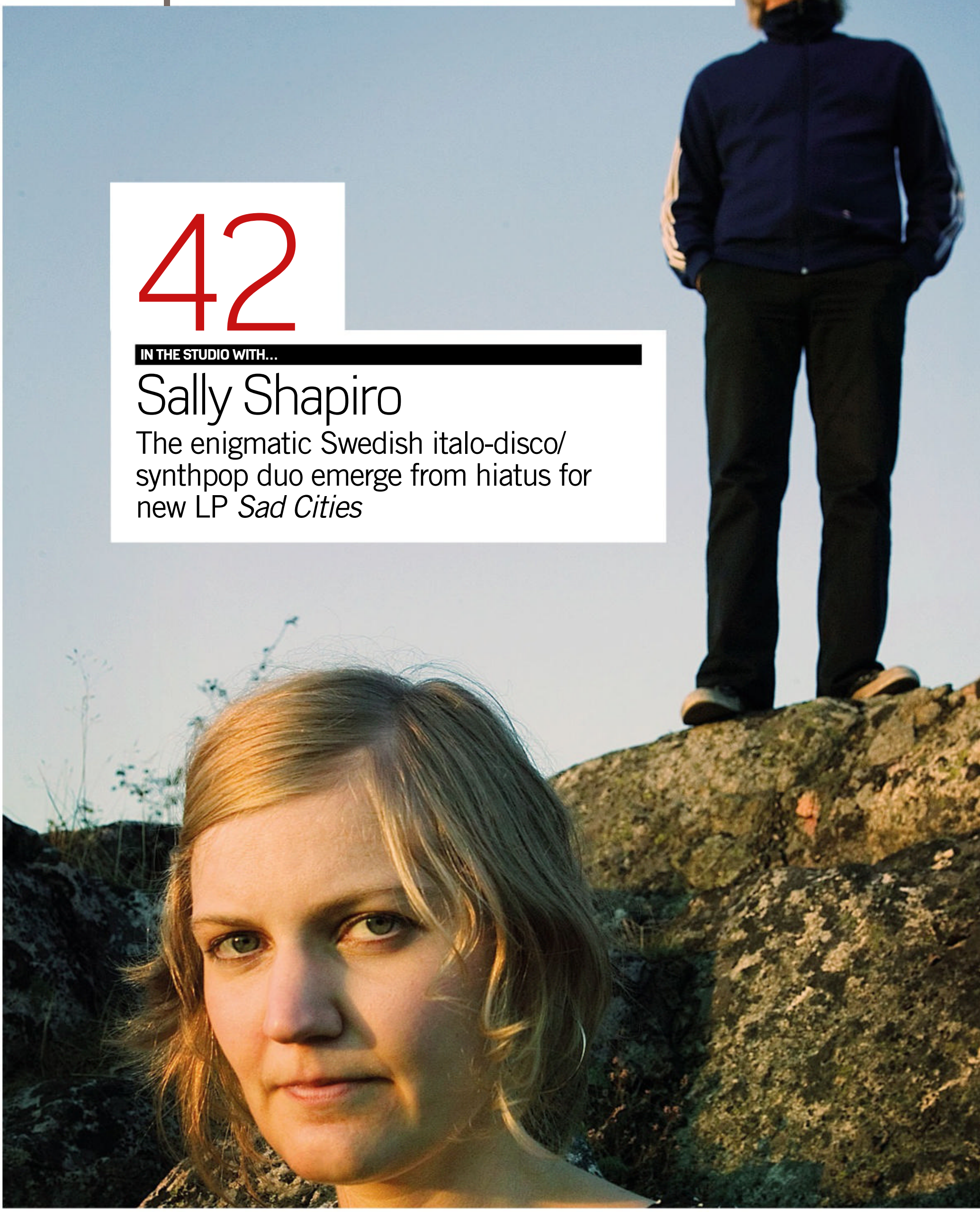
Sally Shapiro

The enigmatic Swedish italo-disco/ synthpop duo emerge from hiatus for new LP *Sad Cities*



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PRODUCE LIKE...

Ploy

INCLUDES VIDEO

The UK producer takes us into his studio and shows us how he made the beguiling tones of *Garys* and new track *Dark Lavis*

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FM's Sample Archive gives you over 18GB of carefully-curated, royalty-free sounds to use in your music. **Here's what's inside...**

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- '90s Ambient (562 samples)
- Ambient Dawn (490 samples)

AMBIENT SOUNDS PT.2
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- Spring Reverb & Tape Delay (533 samples)

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Erica Synths' new DIY kits are part modular synth, part educational tool

Learn to build your own analogue instrument with Erica Synths and Moritz Klein

If you've ever been tempted by the DIY side of the modular scene, but never taken the plunge, Erica Synths and Moritz Klein's new DIY Kits might be the perfect introduction you've been waiting for.

As pairings go, it's a tantalising offering. For the uninitiated, Moritz Klein is one of DIY modular's most popular personalities, known for their thorough but easy-to-follow tutorial videos. Latvian brand Erica Synths, meanwhile, have made some of our favourite gear of recent years, including the excellent Black Series and Pico Eurorack modules.

Designed to teach people with little or no experience how to design analogue synth circuits from scratch, these kits – which will be known collectively as mki x es .EDU – will be arriving every four to six weeks (nine have been developed in total) and will come together to create a fully-featured monosynth.

This will include a sequencer, a VCO, a wavefolder, a noise/S&H module, a mixer, a VCF, an envelope generator, a dual VCA and an output stereo mixer with a headphone amplifier. You'll also be able to buy a Eurorack case to house everything in, along with a DIY PSU.

As well as the hardware, each kit will also come with a detailed user manual that explains the relevant electronics and sound design principles. You'll be guided through the entire building process step-by-step, and the hope is that you'll be able to understand the impact of the choices you make during it.

The first element of the kit, a DIY VCO, is available to pre-order now priced at €60. FM

Could Blue Cat Audio's Connector be the last word in DAW routing?

Blue Cat Audio have released the Connector plugin, which could well be one of the most comprehensive audio and MIDI routing solutions for your DAW around. This lets you transmit audio and MIDI signals in real-time between multiple computers and applications, and you can also create your own routings in a single application.

This is all said to be done at extremely low latency; in fact, when used in a single application, Blue Cat reckons that this can be brought as low as 0 samples.

The applications for Connector are pretty much only limited by your imagination: audio/MIDI streaming, DAW routing, remote plugin processing, feedback loop creation, remote monitoring and remote MIDI control are just a start.

The built-in resampling and drift compensation algorithms promise seamless connection between locations with different sample rates and unsynchronised master clocks.

Connector runs on PC/Mac in VST/AU/AAX formats and is available now for the introductory price of $39/€39.

Darkness descends with Arturia's Noir MiniBrute 2, 2S and DrumBrute Impact

Arturia have revealed new 'Noir' editions of their MiniBrute 2 and 2S synths and the DrumBrute Impact drum machine, giving potential purchasers a stealthier colour option for a limited time. Whereas the standard versions of the instruments have splashes of colour, the special edition models sport completely black exteriors, making them particularly suitable for emo kids and Bruce Wayne. Internally, these analogue beasties are the same as the regular Brutes.

Antelope Audio get even more Zen with USB version of the Q Synergy Core

Antelope Audio have unveiled a USB version of their Zen Q Synergy Core audio interface. This sits alongside the previously released Thunderbolt version. Functionally, this appears to be pretty much the same; we're promised high quality AD/DA conversion, two discrete ultra-linear mic preamps, and recording, mixing and playback up to 24-bit/192kHz.

The 64-bit AFC (Acoustically Focused Clocking) technology and Jitter Management algorithm, meanwhile, is said to deliver increased sound width, separation and detail. This is a 14-in/10-out interface with pairs of headphone outputs, preamps and instrument inputs, and you can add an extra eight channels via ADAT. There's stereo S/PDIF I/O, too.

The Zen Q Synergy Core can be bus-powered and promises low-latency performance, while the onboard software enables you to control signal routing, sub-mixes and monitoring. Said software can also be used to apply the 37 bundled analogue-style effects, which are powered by the onboard DSP. More than 50 more are available via the Antelope Audio software store.

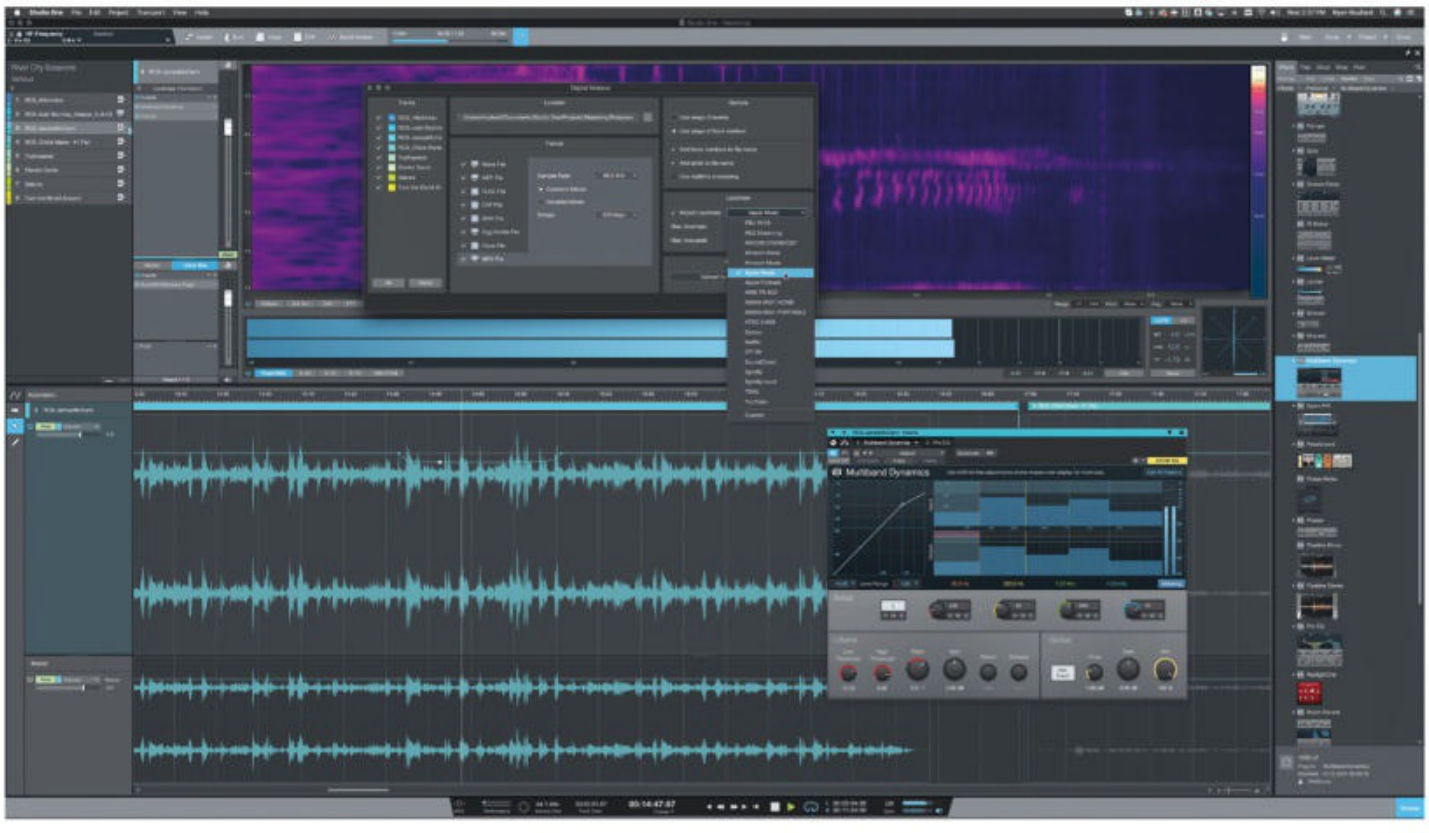
The Zen Q Synergy Core USB costs $899.

Studio One 5.5 helps you get your music release-ready

PreSonus have released Studio One 5.5, the latest version of their excellent DAW. While this does offer some new production features, the headline additions are related specifically to mastering.

You can find these on the mastering-focused Project Page, which now offers track volume, master volume and insert effect plugin parameter automation. This can be written in real-time or using the Paint Tool.

You'll also find Clip Gain Envelopes, which are designed for fixing gain issues without having to pull up your dynamics plugins. The Listen Bus, meanwhile, enables you to monitor through room correction plugins or headphone monitoring tools without affecting the master output, while you can free up processing power for complex mastering chains using the Track Transform feature.



When the time comes to export your master, you can now do so in multiple formats simultaneously (high-resolution and lossless, for example) and you can set the Target Loudness. Presets for popular streaming services are provided.

On the music production front, Studio One 5.5 has a new feature that automatically extracts the chords from any MIDI file you drag onto the Chord Track, and you can now create a strum pattern by dragging notes in a selected chord while holding down modifier keys.

New workflow features, meanwhile, include the option to save automation with mix scenes, and the Plugin Nap feature now works on a per-plugin basis.

The Studio One 5.5 update is a free update for registered Studio One 5 users and is included in the PreSonus Sphere membership. FM

TALKING SHOP

Villager

Alex Young threw himself into producing and performing electronic music earlier than most: after opening up his first DAW at 12, he was playing live at EDC Vegas at only 15 and sharing stages with the likes of Skrillex, Kaytranada and Cashmere Cat.

After a heavy touring schedule threatened to burn him out, Villager retreated from the live circuit and focused on developing his voice as an artist, releasing his debut *Aura* EP on Boys Noize's label in 2019. Three years on and he's further refined his style and approach to production, resulting in a new album, *Frontier.* The record takes cues from the richly textured electronica of artists like Four Tet and Jon Hopkins, repurposing club rhythms into detailed, emotive music that rewards closer listening.

When did you start making music?

"I started producing music at age 12, so about thirteen years ago. I've been playing guitar and drums since I was 8, and just eventually felt a strong urge to start recording and producing myself. It started as just instrumental recordings before I felt the draw to start producing electronic music."

How did you get into DJing and playing live at such a young age? What lessons did you learn from that experience?

"I got into DJing and music production at a young age partly because I was so into computers, as well as music. I started DJing and music production at the exact same time, because of a program my music school had recently started, where they began teaching kids how to DJ with vinyl setups."

"When I started that, I immediately got interested in production as well, and being able to get to the point where I could begin playing my own works out in DJ sets. Working with software like FL Studio and Ableton became a natural extension of these two passions I had, music and working with computers. When I discovered I could have the best of both worlds, I was hooked."

What other artists do you look up to?

"In no particular order: Four Tet, Caribou, Nicolas Jaar, Flying Lotus, Floating Points, Skee Mask, Andy Stott, DJ Koze, J Dilla, Madlib, Imogen Heap, Todd Edwards, Jon Hopkins, and Blawan."

> "GREAT ELECTRONIC MUSIC NEEDS PATIENCE... THE REWARD IS SO MUCH GREATER FOR IT"

Which one track has been most influential on your work, and why?

"*Evening Side* by Four Tet. That might well be my favourite release of Kieran's. It's so powerful. I think it's like 23 minutes or something like that, but it approaches electronic music in such a subtle, meaningful way. I think great electronic music involves patience, and the reward is so much greater for it.

"*Open Eye Signal*, by Jon Hopkins, in my opinion, is one of the greatest techno tracks ever. So much attention to detail, a monstrous MS-20 synth sound, and just listening gives you the impression a *lot* of time was spent making this tune."

Tell us about your studio/setup…

"These days I have a much more extensive studio. I use a lot of hardware samplers like the Elektron Octatrack and Digitakt; my instrument chain is a 1176 into a pair of Pultec EQs into an LA-2A compressor, but that's predominantly just used for instrument tracking. All my preamps and my interface are made by Audient. I used a Manley Ref C mic for a while, but I sold that, and now use Lauten Audio mics along with SM7B for most things."

What DAW (or DAWs) do you use?

"Ableton! I think it's by far the most powerful DAW for working with audio, which is what I mainly do when producing. I don't do too much MIDI sequencing stuff besides Omnisphere. The warping functionality in Ableton is unmatched, in my opinion."

What one piece of gear in your studio could you not do without, and why?

"These days, it's my Elektron Digitakt. I love that thing. It's a little beast. It's so quick for fleshing out beats, and I can do a lot of drum programming stuff in a few minutes, that would take me hours to program inside a DAW."

What was your latest purchase?

"I've been obsessed with this plugin called Infiltrator, by Devious Machines. It's a multi-effect sequencer, but it really shines in its distortion and compression modules."

What dream bit of gear would you love to have in your studio?

"I would love to pick up that Moog Matriarch sometime soon. I've played with it a bunch and it's one of my favourite sounding synths. My far-out gear dreams would be a legitimate recording console like an API, or some really nice compressors for mastering like the Elysia Alpha, Shadow Hills Mastering Compressor, or a Fairchild."

What are you currently working on?

"After this first Villager album is released, I'll be focusing most of my attention next year to my other song project under my own name (Alex Young), and have a ton of music coming out that I'm really excited for people to hear. I'll be trying to produce and write for a lot of other artists next year as well." FM

ALEX'S TOP TIPS

Don't be a perfectionist

1 **"I always tell my production students to focus on broad strokes when making music, and not go too crazy fixating on little nuances or details until the predominant elements of the song or beat are fleshed out."**

Be inspired, but have fun

2 **"Kind of trite, and obvious, but you'd be surprised how many musicians I know who forget to enjoy the craft of making music. It should be about love, passion, and fun more than anything else. When you put other intentions above those, I think it's easy for your music to start sounding clichéd."**

WANT TO KNOW MORE?

Villager's new album, *Frontier*, is out January 29th on MCMXCV

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Krust
Coded Language

Talkin' Loud, 1999

As the 50-strong string orchestra started to play, Krust welled up. Until then this music had been trapped inside him. He knew what it was that he had wanted to say with this album – the pain, the joy, the struggle he'd been through in getting to this moment.

It was like everything that he'd ever wanted to express effortlessly filled the air, and it was beautiful.

"It was like a movie!" says the famed junglist. "The stress that we've been through, and all this effort. All of that stuff that we'd put out, these guys started to play back. It was a magical moment. I just burst into tears. It was such a relief."

This would be his first solo album. And the drum & bass pioneer, who'd helped define the genre through ground-breaking releases with Reprazent, and on the legendary V Recordings, Dope Dragon, and Full Cycle labels, had to dig deep.

"That was the spirit of it: the writing had to really be personal. The storytelling had to be personal. It broke us all in the process."

Helping him tell the story was a tight knit group of close friends and musicians, willing to bare all. String arranger, Simon Hale. Vocalist and songwriter, Morgan. Soul Coughing drummer, Yuval Gabay. Double bass don, Si John. And keys whizz, Mike Crawford. Each opened up, and provided heartfelt loops for Krust to break apart and carefully piece back together.

"I had so much amazing stuff to work with," he says.

The resulting music deconstructed the template of the drum & bass Krust was known for, and fused it with golden era hip-hop swagger, classical music sophistication, film score cinematics, trip-hop depth, and a punk mentality.

"I was experimenting with everything to help soundtrack what I wanted to get across," says the Bristol legend. "I just wanted to make a record that was ambitious and different to what I normally did. I had to push the boundaries and just be bold.

"I mean, why else are we doing what we're doing, if you're not making art for people 10 or 20 years from now?"

Words by Roy Spencer

Track by track with **Krust**

Krust is always busy, and 2022 will be no different. Multi-volume compilations of his extensive back catalogue have been planned. And there's a full tour scheduled in the works for March.

He's also leaked to us that he will be establishing a high level platform for creators, as he's fascinated by the potential of Web 3.0. So, anyone with a relevant skillset in film, design, tech, music, merch and beyond, should hit his website up, and get in on the ground floor.

"What I've learned in making music in all these years is that most people resist their life falling apart, because it feels like you're failing, or that you're entering into something that you can't control. But, the idea of making something that can stand the test of time means you have to transform into something else. You can't be the same person you are in the beginning, middle and the end. It doesn't work. That's not how you make music from the depths of your soul."

High Plains

"I started the track with this cinematic, synth-y, analogue intro. And then it just slams in with this energy that just shakes you up and gets you moving.

"I was thinking about *Indiana Jones and the Temple of Doom*. That's how I want my projects to start – bam! With that action sequence vibe where the plane engine fails, then they jump in the dinghy and everyone's screaming.

"I love that sense that you never know what's going on, you're on the edge of your seat, with this sense of wonder and awe. That feeling of insecurity and uncertainty.

"Now, we don't know where we're going. We don't know what's going to happen next. And it's too late to turn back now."

Re-Arrange

"This track is really like a punk tune that just sort of slams in your face, too. And it's got a very different type of arrangement, as it dismantles song structure and that dancefloor structure, and creates this sort of hybrid animal that also works as a vocal experiment.

"You've also got Yuval Gabay's drums in there. Some sampled drums in there. Some big basslines. And some Si John bass.

"I'm just trying to explore this sort of new territory, and slowly introduce you to this new world.

"Where am I taking you? This is gonna be different, new. This isn't what you've known me for. But, this is where we're going to explore."

Tribute

"It's got big bassline. It's got that travelling energy to it, and it works. You can still play it today, and it still has an energy to it.

"This was like my sole compromise, where this one is a dancefloor tune. It's got the elements and all the hallmarks of a banger, you know what I mean?

"I was mindful of trying to keep my regular fans happy, and mindful that some of this album has to be able to be played in clubs, and my own sets. So, I don't want to go too far down this road, but I do want to keep in the middle. And for me, that was a good compromise."

Excuses

"This is not obeying the normal rules of dancefloor and club and jungle. It's pushing the boundaries, again.

"But it's sort of a challenging track to me because it's between a few different ideas and not quite executed to how it could have been. So, yeah, I was never really happy with that song.

"If I could go back I'd definitely change the bass. Oh, definitely. Create something else.

"I would probably do more to get Mike [Crawford] in to actually play more of the keys while we were doing the track. I just got loads of samples in of what he did.

"I think the drums are really great, though. I love the drums in it."

Interlude

"This is a very short track. I was there to just really signify that we're going to go deeper now. We're going to go to a different phase of the album.

"I like to mess with your senses, and give you a sense of adventure. For me, when I'm writing an album, I'm trying to break you down bit by bit through the album. Trying to get you to leave your present world where it's safe and familiar. And then come on this journey into my world.

"You want to give the listener the space to relax, and make them feel comfortable. Come along and take you on that journey."

Overture

"This was that half-time beat. What's interesting about this was that we mastered that track in Jamaica. We pressed it up as a seven-inch vinyl version over there, because of that different sound that you get when you press in different countries. That was [Talkin' Loud's] Paul Martin's idea.

"This track was Wu-Tang Clan-inspired. I loved them. They soundtracked my early jungle and Full Cycle days. Me and DJ Die would play them all the time as we toured America. "So, this track was my sort of hip-hop effort. Just doing something a bit slower, a bit half-time, and a bit phat as well.

"It was mixed in London, and those guys really did make it sound epic, too."

Coded Language

"This features the slam poet and rapper, Saul Williams. Paul Martin called me and said I had to meet him in London as he was amazing.

"I went up and he's in the studio and he opens this giant scroll with lyrics on and – bam! Goes into it with that intensity you hear on record. I was blown away. I couldn't even speak, and I'd never heard anything like that in my life. We got him to the studio in Bristol the next day and he nailed it in two takes.

"There was a line where he said, 'We decipher a coded language'. And I was like, that's the fucking title for the track, and for the fucking album as well!"

One Moment

"I was fortunate enough to work with Simon Hale, the string arranger on this track. I remember we had big conversations about the strings. [Album vocalist] Morgan was quite involved in that process as well, given that they are harmonies.

"I wanted to create something that when you listen to it, it will transport you somewhere. At that time, I really was just scratching around trying to find the light in these dark rooms. But when we did the strings with Simon, that was a real shift for me.

"We would start by him reinterpreting what I was doing on keys and stuff with samples. Then he got the full orchestra in Angel Studios in London, which was a very emotional experience."

Guilty

"For this track I found this JFK sample where he was talking about the opportunity and what's available.

"I think that was another of my sort of Wu-Tang inspired tracks. Or at least hip-hop-inspired. It's a half tempo tune, too.

"And I think that was Morgan at her best on that tune there. She really shone through and everything just seemed to fit together.

"I think that's one of the better tracks on the album, structure-wise, everything just fits in that flow. And it's a good combination between live samples and breaks.

"Making the track was quite simple and effortless. It was like it wasn't a real kind of problem at all."

> "THE PIONEERS OF JUNGLE MUSIC WERE COMING OF AGE. WE HAD THAT WARRIOR SPIRIT"

Spoils Of War

"These next few tracks are about the fight, you know? We'd survived the Thatcher era, the miner's strike. The Mods had finally put their hats down, and now it was time for the reign of hip-hop and electronic music.

"And so there's big transitions going on in the world. And we were just settling into these eras. The pioneers of jungle music were coming of age. We were't kids anymore. We had that warrior spirit, the Navy SEAL mentality. We are gonna fucking get through this and really dig deep.

"It turned out that all of the stuff I was writing in these tunes was actually me sending a letter to my future self."

Soldiers

"So now it's like, of course we're fucking soldiers! We had to have been. For what we had to do to create Full Cycle. Most people would never really get to know that real story. About being part of a grassroots movement, and seeing it through.

"This is what you go through mentally, with the separation, and your family, your friends, your loved ones. The people around who don't get you, and the strength that you have to embody because you feel lost for a while.

"You think, jeez, I'm making this music. This is what this is, what comes natural to me, and people are hating me for it. And that really is a real test of character. And so, *Soldiers* is very much talking to that spirit."

Noble Assassins

"Jungle was representing the underdogs, those noble assassins. There's millions of us, and we needed a soundtrack. Something to rally to. That's what punk was about. That's what Mods were about. Jungle was in exactly the same spirit. It was like we were just saying fuck off to everybody who didn't understand us.

"It's about the recognition, and how I've grown and become this person. Like, we're all noble. We're all assassins. We all have to be capable of upgrading ourselves and finding that fighting spirit, because there's going to be a time when we need to do that."

Second Movement

"The final track is a continuation of the *Interlude* I think, and *Guilty*. There's a similar theme going through those three tracks. And yeah, it's a bit more of like, the conclusion where we're trying to resolve all of these arguments now.

"I wanted to say that we're going to leave now with a clearer understanding that there is opportunity out there. There is prosperity to be found. And it's like we need to win in the mind first. And so let's settle down. Let's meditate, visualise. And let's listen to this last piece of music with that same optimistic view." FM

In the studio with Krust

"We used to have a studio in Bristol in a place called the Easton Business Centre by the adventure playground. So, we had a unit in there, and it was quite small, really. I didn't have a lot of stuff. I had a Moog, an E-Mu e64. The ARP/Solina. The Roland 760 and 550. A big set of Tannoy speakers. A little Mackie desk, and an Atari ST 1040.

"All the vocals and the strings were on ADAT, and you're syncing it all up with this weird little box, and then pressing play. You had to rewind the tape and then start from the beginning. I remember when I moved to Pro Tools, the amazing thing was that you could start anywhere in a track! But, back then it would have been Cubase.

"Then I used live musicians like samples. I wasn't musically trained at that time. I got my education through sampling and understanding how to put layers together. And so that's the way I approached it."

WANT TO KNOW MORE?

Visit **djkrust.com** and sign up to be the first to experience his exciting new multi-platform project

LIKE IT? TRY THESE...

Krust
The Edge of Everything

Staggering 2020 long player, and his first new album in 14 years, soundtracking the depths of a metaphysical netherworld.

ADD THESE TO YOUR PLAYLIST:
'Hegel Dialect', 'Negative Returns', 'Space Oddity'

Krust
The Edge Of Everything (Remixed)

Re-staggering 2021 reconstruction of the above LP, re-imagined by the great and good of the electronic music biz.

ADD THESE TO YOUR PLAYLIST:
'Hegel Dialect (UNKLE Reconstruction)', 'Negative Returns (Four Tet Remix)', 'Space Oddity (Batu Remix)'

Krust
Through The Eyes

DJ mix comp from the millennium, full of Full Cycle goodies and phat tracks from Krust compadres like Suv, Size, and Die.

ADD THESE TO YOUR PLAYLIST:
Roni Size – 'On Point', Suv – 'Parklands', Die – 'Jitta Bug'

Roni Size / Reprazent
New Forms

1997 Mercury Music Prize-winning album from Krust's killer collective that helped get jungle into the mainstream. Si John on bass, too!

ADD THESE TO YOUR PLAYLIST:
'Brown Paper Bag', 'Share The Fall', 'Heroes', 'New Forms'

Various Artists
Build & Destroy (The Best Of Mo Wax Recordings)

Dope mix of the seminal trip-hop label – a big influence on Krust (who remixed them and was nearly signed as a soloist).

ADD THESE TO YOUR PLAYLIST:
DJ Krush – 'Dig This Vibe (The Legal Mix - Lawyers Smoke It)', Palmskin Productions – 'The Beast (System Remix)', U.N.K.L.E. – 'The Time Has Come (Portishead Plays Unkle Mix)'

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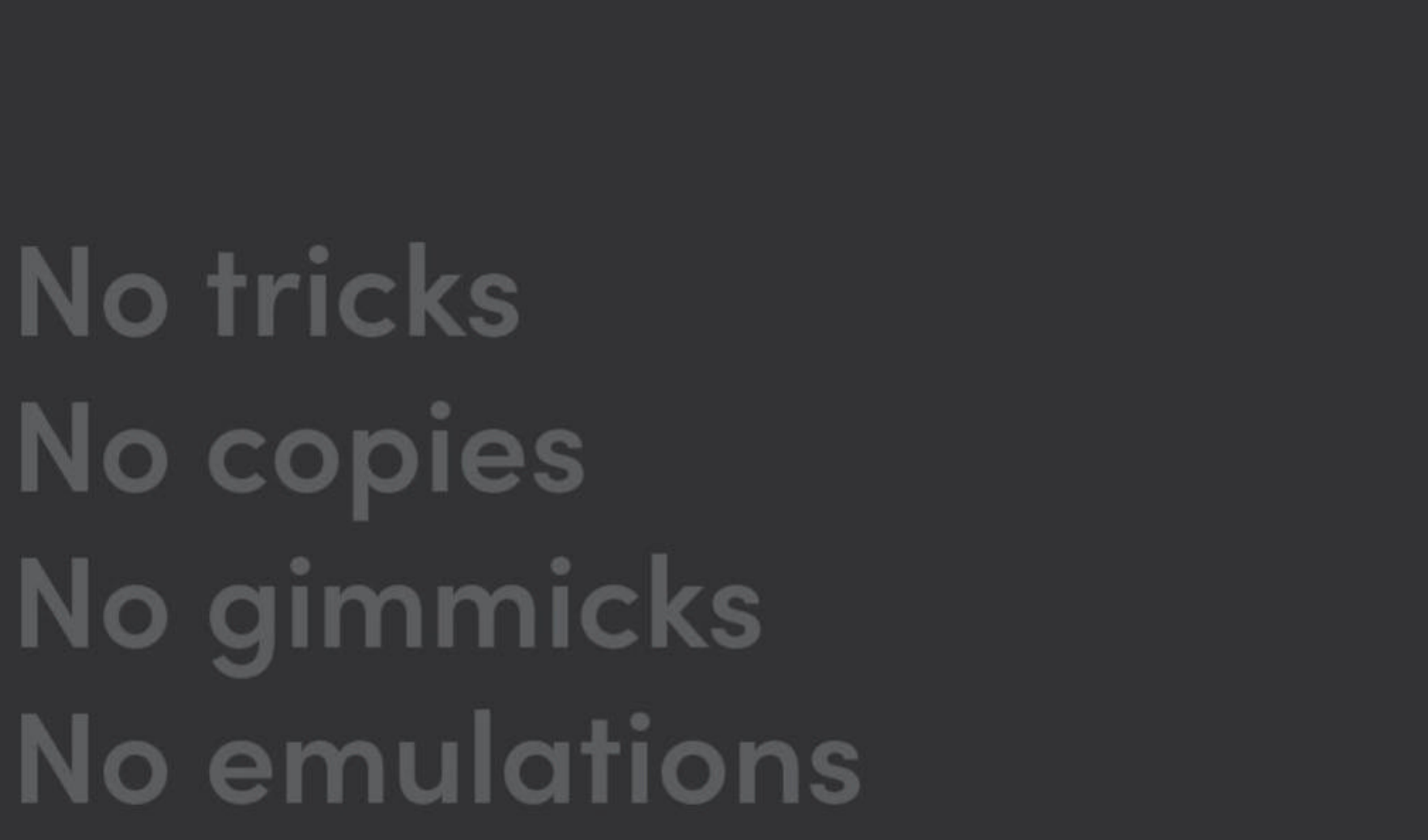

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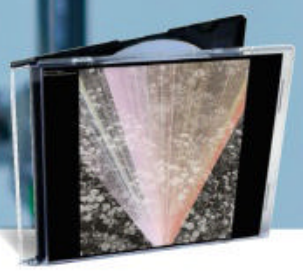


Carmen Villain
Only Love From Now On

Smalltown Supersound

This is the dreamy, enigmatic and alluring fourth studio album from US-born, Norwegian-Mexican artist Carmen Villain. Although the transition has been gradual, this new record signals the complete detachment from the singer-songwriter traditions of her early career and the anchoring down in the ethereal ambience of her more recent work. Any anchors in this album could be made of bracken though, such are the airy, cloudy, and amorphous structures that meander peacefully throughout the record. Subtle and manipulated wind instrumentation blends with natural field recordings and nuanced synth backdrops. The result is an easily flowing soundscape that feels as tranquil and healing as it is interesting. It somehow feels abstract and unfamiliar, yet at the exact same time warm, inviting and intimate. Moving between ambient and elements of cosmic jazz, we are pulled down a hazy, trippy path that sucks us into pockets of deeply meditative states. Very subtle overtones of dub work their way into the landscape from time to time, adding a more visceral physicality that interplays perfectly with the natural sounds that grow around the spine of the record. And it's that brilliant balancing from Villain that makes this record so sublime and alluring. It is sensuous, impulsive and delicate, but is it also woven with clarity of thought and purpose. A wonderful album from a brilliantly distinctive artist, who is always evolving and developing, this is Carmen Villain at her stunning best. ***Tom Jones***

ADD THESE TO YOUR PLAYLIST:

Gestures, Only Love From Now On, Silueta

9/10

ALBUM OF THE MONTH

Pan American
The Patience Fader
Kranky

Known for his role in US post-rock outfit, Labraford, Mark Nelson has been experimenting as Pan American since 1997. His latest release, on long-time home Kranky, is a highly atmospheric and deeply intimate collection of experimental, instrumental solo guitar compositions. The guitar sketches are elegant, stretched out pieces that conjure up a wistful, melancholic feel throughout the record. The pieces are then augmented by lap steel, harmonica motifs and a clutch of fuzzy, hazy atmospheric electronics. The stripped back and bare aesthetics of the album and the smudged atmospherics and smeared strings immediately transport you to a barren, winter landscape in the American rust belt. But such is Nelson's skill, that beacons of warmth and light creak through the heavy fog and illuminate the record with a sense of calmness and humility. Windswept swells of guitar feel reflective and intimate, like memories drifting into the mind and then wafting off again just as quick. That lulling and lilting is a theme of this beautiful, emotive album. ***Tom Jones***

ADD THESE TO YOUR PLAYLIST:

Swimming in a Western Hotel, Harmony Conversion, Night Water

8/10

Concret & Chelsea Hines
Symptoms Of
La Vida Discos

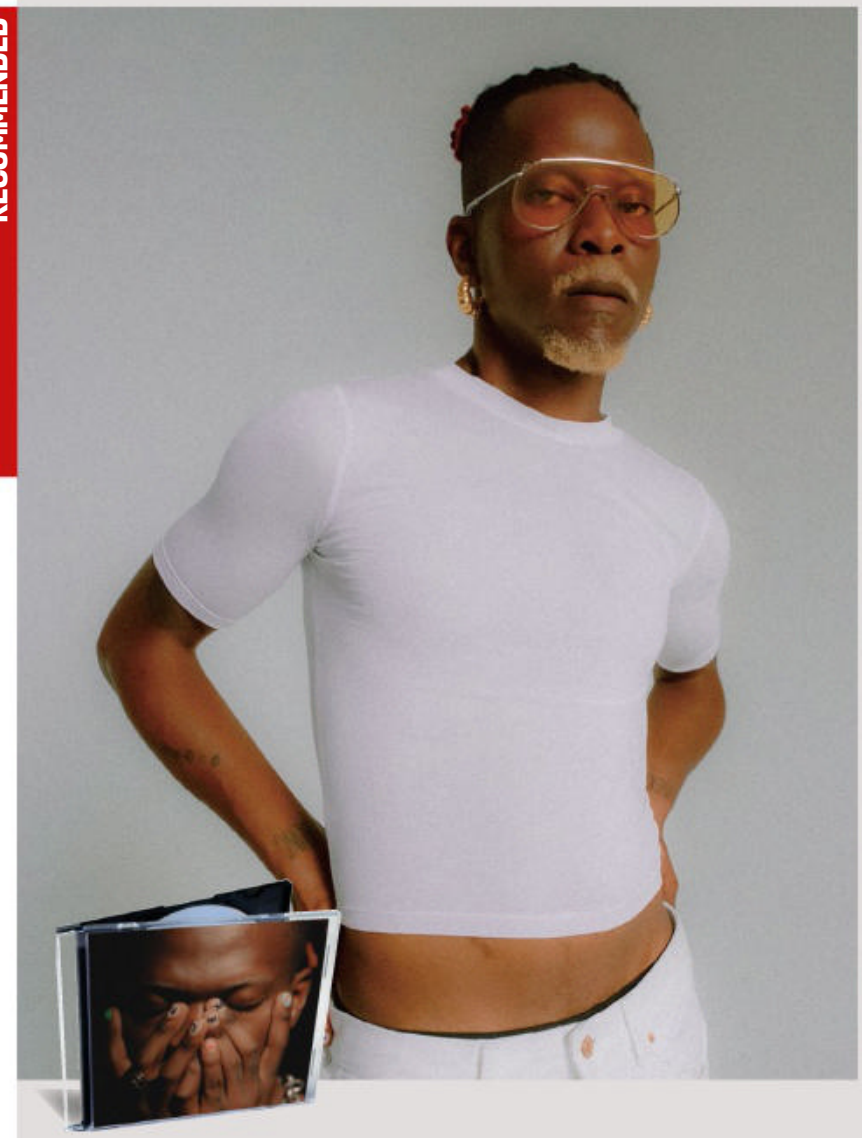
Symptoms Of is the superbly atmospheric debut collaborative album between Concret and Chelsea Hines. Drawing on elements of minimal synth, new wave synth, industrial, dub, post-punk, dark disco and left-of-centre electronica, the duo submerge us into a dark underbelly of atmospheres. Italo-Mexican, post-punk influenced drummer, Diego Angelico Escobar, aka Concret, provides the album's driving momentum and immersive rhythms that pull us along for the ride. US singer, guitarist and violinist, Chelsea Hines' softer, spellbinding vocals lift us out of that heaviness and into the more gothic clouds of fog that envelops and disorientates us. And it's that sense of exploring extremities where the beauty of this album lays. Spiralling fuzzy guitars, angular synths and alluring vocals pull you away, but the ever-bristling low-end is always pulling you back to the centre. Creating a dark, intense, imagined world, while seeping light and warmth, Concret and Chelsea Hines have created the perfect late-night, leftfield journey with *Symptoms Of*. ***Tom Jones***

ADD THESE TO YOUR PLAYLIST:

Perfect Body, Duck You, Joy Infinita

8/10

RECOMMENDED



Pierre Kwenders
José Louis and Paradox of Love
Arts & Crafts Productions

Congolese-born, Montreal-based musician, songwriter, and DJ Pierre Kwenders' music is full of energy, life and colour. His third LP, *José Louis and Paradox of Love* takes an all-encompassing approach to capturing the joy across the world in a wonderfully eclectic collection. The record straddles multiple genres, uses an array of instruments, includes multiple collaborators and was recorded in multiple cities, including Montreal, Lisbon, Seattle, New York City, Philadelphia, and New Orleans. Kwenders sings and raps in several languages, including Lingala, French, English, Tshiluba, and Kikongo. The result is an album that feels completely free and unrestrained. Moving between pop, electronic music, rumba, hip-hop, rap, Afrobeat and subtle elements of jazz, this is an ever-shifting soundscape that blends seamlessly laidback grooves, energetic rhythms and sun-kissed vocals. The swinging basslines inject a party, fun-filled atmosphere, which is only ramped up by the expressive vocals that flood the record. Catchy guitar hooks join sax, shimmering trumpets, classy violin, cello, synths and the Mbira to drive this vivacious and, at times, raucous record. Kwenders' skilled, nuanced blend of Afro-inspired electronic sounds is a triumph, conjuring a life-affirming sense of the interconnectivity of us all. ***Tom Jones***

ADD THESE TO YOUR PLAYLIST:

Papa Wemba, Kilimanjaro, Church

9/10

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Creativity is hard sometimes. For music makers there are no shortage of potential roadblocks on the way to finishing a new project. For some people that might come at the start, as a paralysis of choice sets in when confronted with an empty DAW and a wealth of potential tools and influences. For others, the hardest part comes later, when it's time to turn those initial ideas into a fully realised arrangement. Whether you can relate to either of these situations or not, it's a rare thing to find a producer or musician who has never encountered some kind of creative stumbling block – and that's why our 30 day workshop is here to help.

What we're not going to do this issue is tell you exactly how to write or produce your tracks. You can find plenty of specific genre, instrument and mixing tutorials in previous issues of FM, or online at our sister site MusicRadar.com. But no two readers' aims and influences are going to be identical, so there's no point in us trying to tell you exactly what type of beat to sequence or what key your bassline should be in.

What we are aiming to do is provide a structured workflow, ideas for overcoming common creative roadblocks and a guide to writing, recording and releasing electronic music. Whether you're starting a new project and want to work on your first release, or an established music maker looking for a way to shake up your process, we hope you'll find some fresh ideas and approaches over the next few pages.

Why a three-track EP? We wanted to aim for something achievable but still substantial in our 30 day window. We've tried to offer a few different approaches at each stage, and working on three tracks at once allows you to try a few different ideas. That said though, there's nothing here that can't be scaled up or down. If you're short on time, aim for a single track. Want to challenge yourself more? Why not try a full album? Whatever feels right for you.

DAYS 1 TO 7

Inspiration

Aims:

> Find inspiration
> Plan our tracks
> Gather sounds and creative ideas

Avoid the blank canvas

There are a lot of producers and music makers who are happy to sit down in front of an empty DAW, or start a studio session with no preparation, and see where inspiration takes them. That's great, but it's not an approach that works for everyone every time.

Moreover, while starting a new project can often feel easy and exciting, developing those initial ideas is often much harder. Electronic musicians from beginner to pro can likely identify with the '16-bar loop' problem; the peril of creating a great initial idea but then getting stuck after listening to it on loop, unsure how to take it further, and eventually losing enthusiasm for it altogether.

Planning and preparation aren't essential, but it can help you defeat these hurdles when you come to them. It might seem like a waste of time to spend the first seven of our 30 days on things that don't involve making any actual music, but knowing exactly what we're aiming for will go a long way towards speeding up the creative process later on.

Of course, if you really don't think it's worth it, feel free to skip ahead, but even if you're someone who regularly turns out fresh finished tracks without hitting any creative roadblocks, a little brainstorming could help foster a few fresh ideas.

"THERE'S NOTHING DISINGENUOUS ABOUT USING AN EXISTING TRACK AS A JUMP-OFF POINT FOR YOUR OWN CREATIVE IDEAS"

Taking inspiration

Music does not exist in a vacuum; however revolutionary a track might sound, it can always be related to something that's come before. There's nothing disingenuous about using an existing track as a jumping off point for your own creative ideas. That's exactly what we're going to do here.

Before getting to work on your own tracks, start by making a 'mood board' playlist of music you enjoy that exists in a similar genre space to what you want to create. Add a decent number of tracks with a fair amount of variety. Listen to the tracks together and make notes on common characteristics, such as mood, BPM, track elements. Try to establish what it is that appeals to you about all of those tracks, and what you'd like to capture in your own music.

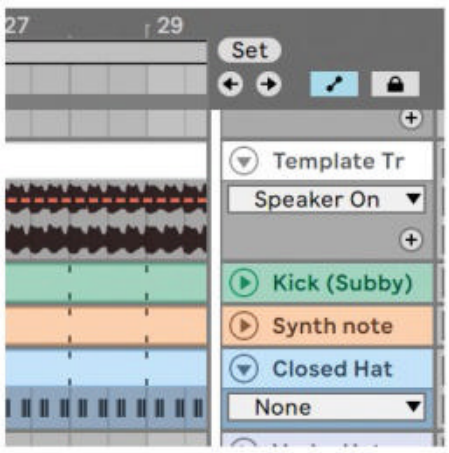
The next step is to establish what exactly we want each of our three tracks to 'do'. Aiming to make the exact same track three times is going to be boring, not just for your listener, but you yourself. Think how each of your three tracks can complement one another. Perhaps you want one hook-centric 'A-side' followed by two more spacious or leftfield tracks? Maybe choose to switch tempos or even genres – following a techno track with something at drum & bass tempo, then finishing off with something beatless and ambient? Maybe one track will focus on melody, another more on rhythm and percussion? For each track, write down a rough bullet point list of qualities and ideas you hope to capture.

Once we've established a rough idea for each track, let's make a 'placeholder' EP. We'll do this by selecting three songs from our 'mood board' playlist that most closely match what we want our tracks to sound like. These don't have to be too similar to your intended result – the aim here isn't to rip off an existing song – but rather to provide a broad jumping-off point for the exercises on this page. We can also use these as reference tracks when it comes to mixing and mastering later on.

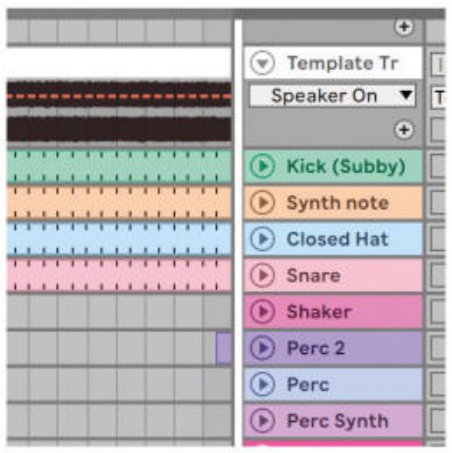
Building a template

A great way to overcome the '16-bar loop problem' is to create a rough song template before you even begin creating any sounds. Do this by creating empty MIDI clips across your DAW's arranger for each major track element, sketching out a map of how you expect your song to progress. This doesn't have to be a final arrangement you end up sticking to rigidly, but it will be much easier to 'remix' this rough idea than start with a totally empty timeline.

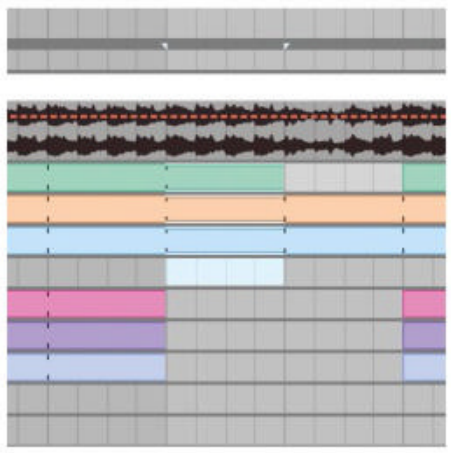
An easy method for creating these kinds of templates is to base them around a reference track. Drag one of your 'placeholder' reference tracks onto your DAW's timeline, and follow the steps below to create – and reshape – a template from it.



Play through your reference track one 16-bar section at a time. Whenever a new element is introduced, create a new MIDI track and add an empty MIDI clip to represent this new part. Duplicate parts as you listen to the track, but remove any part that cuts/fades out. Listen through to the reference track a couple of times to make sure you haven't missed anything.



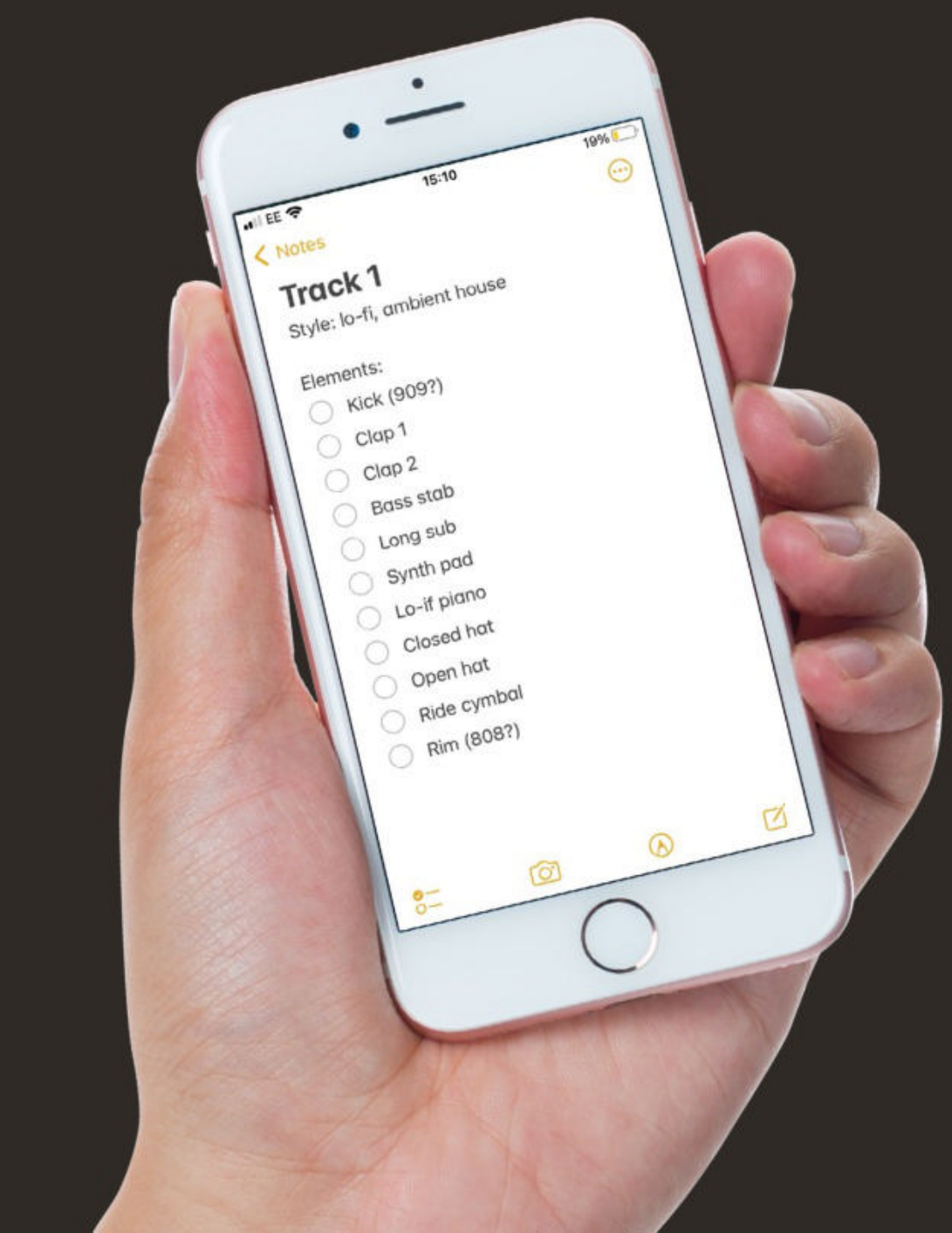
Label each element. No need to be too specific – we're not trying to replicate our reference track – simply tagging elements as percussive or melodic would do. Or use rough labels such as 'kick', 'bassline', 'pads', 'chords'. Try using colour coding to show how a part progresses throughout the track – eg make a synth's clips a light colour as the filter opens.



Now we can start 'remixing' our reference track, even before creating any elements of our own. Try extending sections, or moving the breakdown. Does your reference track start with just drums? Try swapping it out for a melodic element. Again, we don't have to stick to this, but it will provide a starting sketch to work around later on in the process.

Make a 'shopping list'

Based on the exercises on the previous page, we should now have a few things: reference tracks for each of the three songs we're going to create, a list of the qualities we'd like to capture for each track, and a rough arrangement template. From these, we can now create a 'shopping list' of the elements we'll need for our track. List everything you think each track will need, from drum elements to melodic parts – eg 8-bar chord progression, bassline 1, bassline 2 – to one-off stabs, hooks or FX. You don't have to match the parts in your reference track like-for-like, but if you decide to ditch something, consider what role it was filling and whether you need something else to replace it. You may not want a lush synth pad in your track, for example, but is losing it going to make the mid-range feel too empty? Try replacing it with some reverb-drenched piano chords.



Searching for samples

Whether you choose to use samples in your track is up to you. You may want to create something entirely from chopping and layering loops, or compose around a central sampled hook. On the other hand, you might forgo samples altogether in favour of synths and drum machines. If you are planning on incorporating them, it's worth compiling a sample pack before you set to work. For something unique and inspirational, vinyl bargain bins and YouTube are tried and tested sample sources. But remember, using samples with unknown or uncleared copyright could hinder your ability to release your tracks! Don't forget, for guaranteed royalty-free one-shots, chords and loops, you can use the Sample Archive that comes with this very magazine (see the contents page for more info).

Processing samples

Building a library of appropriate samples is half the battle, but applying some simple processing can go a long way too. For one-shot drums in particular, it's worth doing a bit of prep to make sure your beats hit the mark when it comes time to sequence. For weaker-sounding samples, layering is often a good idea – try adding high-mid 'clicks' to help kicks cut through. Alternatively, cutting unnecessary low or sub frequencies from elements that don't need them can help prevent muddiness later on. For percussive sounds, applying some light compression, transient shaping and a touch of room reverb to individual hits can make the difference between a beat that jumps out of the speakers and one that needs a lot of work at the mixdown stage.

Set up a toolkit

Whether you plan to use samples, plugins, hardware or a mix, it's worth deciding on the tools you plan on using before you begin. Consider what's right for the sound you wish to capture. Certain genres lend themselves to specific sounds – eg TR-909s for techno, MPCs for hip-hop or breakbeats. Feel free to subvert these conventions. If you're not sure what gear suits a particular style, do some research. FM's YouTube channel is crammed full of studio tours and track breakdowns that allow you to see what a variety of producers are using. One final tip: set limitations – paralysis of choice is a real problem. Decide in advance on a few instruments to use for your tracks and try to wring as much from them as possible.

Ready your setup

The final step before we begin is to make sure your setup is optimised for quick creativity. If you're working in the box this is fairly simple, but it's still worth making sure your software is up-to-date and any sample folders are organised and accessible. The more hardware you're using, the more you're at risk of setup issues. Make sure all your audio inputs are appropriately routed, listen out for unwanted noise/electrical hums and check for sync or latency issues – all factors that can derail your creative sessions. Finally, make sure your studio is a pleasant and inviting place. Clean and tidy the space. Set your lighting how you like it. Ensure your gear is ergonomically positioned.

DAYS 8 TO 14

Generating ideas

Aims:

> Create loops, patterns and ideas for our three tracks

Let's get creative!

Armed with our notes and a 'shopping list' of elements we'll need for our tracks, it's time to get creative. This stage is all about creating rough ideas that we can flesh out into full tracks later on. We won't hold your hand and try and tell you exactly what, or how to create at this stage. Ultimately, this is where your own creativity comes in, and precisely what you're writing and how you're doing so is going to come down to your own particular style and workflow. However, below and over the page, we have laid out a few potential approaches that might help to spark a little creativity if needed.

It's worth noting a few things though. Firstly, that 'shopping list': the aim here isn't to stifle your creativity. You don't need to monotonously tick off a list of kick drums, basslines, pad sounds, etc. Rather, let it guide your next steps. If you've created a drum groove you're happy with, check what else your template track requires and try to come up with new elements based on what you've already created. Creating more than you need is a good tactic, it's nice to have options!

Equally, our notes from the previous steps should help keep you on track. It's all too easy to get distracted by a new idea without finishing the thing you're working on. If you find yourself inspired by something that doesn't fit the project as planned, you don't have to abandon it completely, but maybe file it away for later use.

One final consideration – what form should you capture these ideas in? For the most part that's up to you. What we're looking for is to create a bank of largely ready-to-go track elements we can lay out into an arrangement in the next step. The simplest way to capture these might be as audio, but obviously this introduces limitations on how much you can change later on (although that might be a good thing). Alternatively, you could create MIDI files and saved instrument presets, or even save patterns directly into a hardware sequencer, synth/sampler or modular system. However you feel most comfortable working is the right way to go.

Three approaches to generating ideas

1 Jam and comp

Comping tools are now pretty ubiquitous across the board, existing for a long time in the likes of Logic or Cubase and more, recently added to the more 'electronic' DAWs Ableton Live and Bitwig Studio. Comp tools are often thought of as best used for vocal takes, but they're also fantastic for capturing and amalgamating elements of a synth, guitar, keyboard or even drum machine jam. Pick an instrument and improvise for a while. Play to your strengths – if you're not a keys player, use a sequencer and get hands-on with filters and effects, introduce some randomisation. Most comp tools let the user fold longer takes down into layered loops. You can then use these to pick the best parts of your jam session, mashing up riffs, patterns or tonalities into a single loop.

2 Resample 'mining'

An often fruitful way to get the creative synapses firing is to take a single sound and see how many different track elements you can create from it. A sampled loop – either rhythmic or melodic – is always a good place to start. Try feeding your loop through creative effects such as extreme reverbs, comb filters, delays and the like, and resampling the results. Or attempt to pick percussive elements from a melodic loop, or turn a percussive sound into a melody using resonator effects. For a great example of this approach, check out this issue's Produce Like… with Ploy, where he uses a sampled loop to create both the hook and atmospheric elements of a track.

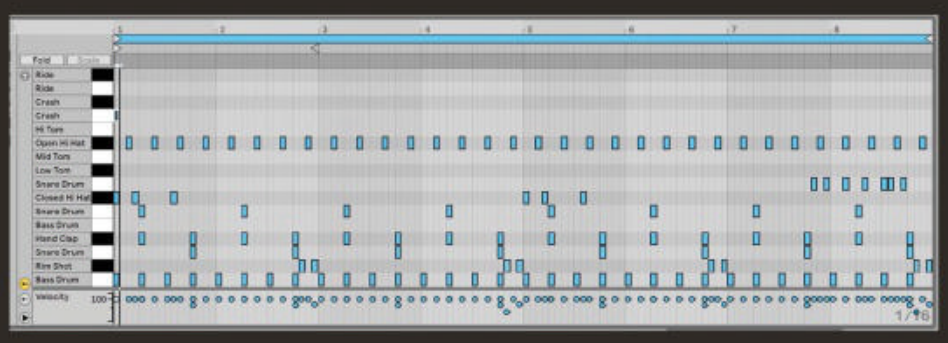
3 Raid old projects

Do you, like many of us, have a wealth of half-finished or abandoned projects lying around on your hard drive? These could be the perfect place to start when looking for ideas and elements for your next track. Just because something ended up as a creative dead-end previously, doesn't mean you won't find new inspiration when revisiting it. It's common to find that a bit of time and distance can help you look at old ideas from a fresh perspective. Even if you don't find something ready to reuse wholesale, try sampling your old ideas. Export abandoned loops, melodies or whole tracks and treat them as if you were sampling any other record, slicing out your favourite elements and applying creative effects.

6 quick electronic music composition tips

Double and add

1 Find yourself constantly creating short and simple loops? Try this. Start by creating a one-bar pattern. Now double it and add a new event or variation that only occurs every two bars. Double it again and add something that only happens once every four bars. Keep going until you have something 32 or 64 bars long. This is a quick way to add variety to drum grooves or create repeating motifs that can still hold a listener's attention.

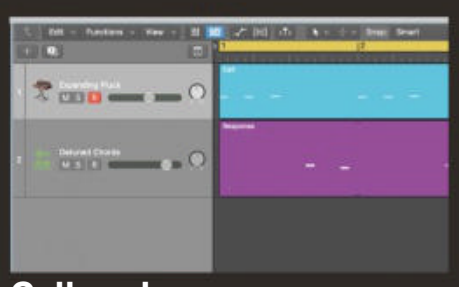


Combining arpeggios

4 Everyone loves an arpeggio! Arp lines are a great tool since they can add melodic interest and rhythmic drive. For something more complex, try layering arpeggiator patterns using multiple instruments. Start by creating a simple chord pattern, fed into an arpeggiator and synth. Now duplicate this whole setup. Change the synth sound on this second arp for tonal differences, but also try adjusting arp settings, such as timing, octave range or pitch offset. Automate these parameters as your track progresses to change the interaction between the patterns.

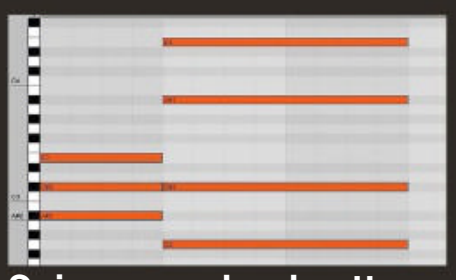
Creative delays

5 Never underestimate the potential of using a delay effect as a compositional tool. With wet/dry set to 50%+, a delay will radically alter the rhythm and feel of even a simple one-note pattern. Try feeding simple patterns or rhythms into your favourite delays, and then bounce down the wet signal as a new groove. Similarly, use pitch-shifting delay effects, which can help you generate melodic patterns that break from obvious chord structures.



Call and response

2 Call-and-response is a technique used in various musical traditions, and can work wonders in electronic music too. It's incredibly simple: create two elements, where the second seems to 'respond' to the first. Think of the bassline/piano in Queen's *Under Pressure*. Try creating a melodic riff that mimics the pattern of a rhythmic element, or introduce a chord 'stab' that lands as a response to your bassline.

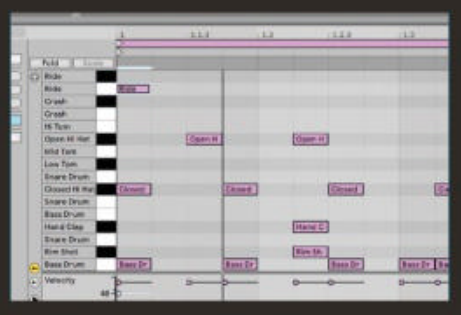


Spice up a chord pattern

3 Looking for easy ways to add depth to a pattern of simple triad (three-note) chords? Add notes above the triad, skipping every other note in the scale, to create seventh, ninth or eleventh chords. Rearrange the notes in your chord, moving some below the root note to create inversions. Give suspended chords a go, too. These involve taking the middle note of the triad and moving it up or down by one scale note.

On the one

6 Do you find your looping patterns lack a slight sense of purpose? Try adding a little one-off something to the first beat of each phrase. This could be a chord stab, a crash cymbal or some kind of FX hit. This might sound like a simple and obvious tip, but adding a little something to help define the start of your groove can help to grab the listener for what comes next. Even low in the mix this can help turn a 'loop' into a proper section of your track.



DAYS 15 TO 21

Creating an arrangement

Aims:

> Turn our ideas into full tracks
> Add movement and tension to your work

Hopefully by now you should have a variety of ideas that fit the brief you set yourself with week 1's exercises.

It's this next stage of the track creation process that can trip up a lot of music makers; transforming an idea we're excited about into a full track without draining all of our enthusiasm for it in the process.

This is where the templates created in week 1 come in. Take your ideas, loops and track elements and – as best you can – lay them out in, or record them into, your DAW's arrangement window to match the structure of your MIDI template. This won't instantly give you a finished track – you'll undoubtedly find plenty of areas that need refinement. Hopefully though, refining your tracks based on these initial frameworks should feel less daunting than staring at a 16-bar loop and wondering where to go next.

Your first step should be to decide what's missing or needs moving. Does your track's intro feel too long or short? Do your chords need backing up with a synth pad? Is the bassline carrying the weight of the track or do you need an extra sub to back it up? You might find that certain sounds don't feel quite right now that they've been placed in a wider context, in which case it might be worth swapping or rerecording elements.

The second stage is to edit your arrangement for movement and tension. If sounds remain static throughout the track, you're unlikely to hold listeners' attention. This is particularly true in dance music where build and release – aka 'the drop' – is key to engaging the dancefloor. This is achieved in a variety of ways, the most obvious being through automation – changing the parameters of a sound – or the addition of 'transition FX', ie pieces of audio designed to bridge the gap between track sections. The most obvious example of these latter elements are the white noise builds heard regularly in dance music.

On this page you'll find some tips to help you flesh out and add movement to your arrangements.

Two alternative techniques for turning loops into full tracks

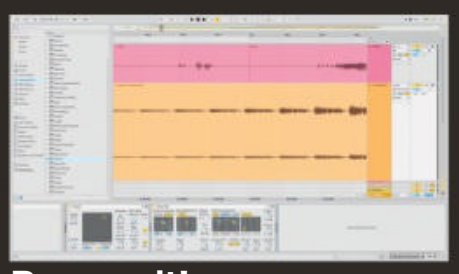
Subtractive arranging

1 Subtractive arranging works on the principle that it's easier to remove things from your track than add them. It works like this: stack every element you have for your track into a single looped phrase at the very start of your DAW's arrangement window. Now duplicate this loop enough times to fill a rough duration you'd like for your track. Your task now is to delete elements in order to 'carve out' an arrangement. Delete major elements to create a simple intro/outro, have riffs, basslines and chord progressions swap in and out, strip things back to create a breakdown and then bring them back in for a sensational 'drop'.

Go live!

2 A good way to make arrangements feel more natural and progressive from the get-go is to perform your track live. There are several ways to do this. If you're using hardware or real instruments, you might choose to record your track as if it's a multi-tracked session with a band, adding overdubs as needed. In software, the clip launchers found in DAWs such as Live, Logic and Bitwig allow a similar method. Break your ideas down into individual clips and scenes and lay them out within the clip launcher. Then, using a pad controller or mouse and keyboard, trigger clips in an order that feels 'right' as you're listening, without concerning yourself with what it looks like on the timeline.

6 tricks for adding movement and tension to your arrangement



Reverse it!

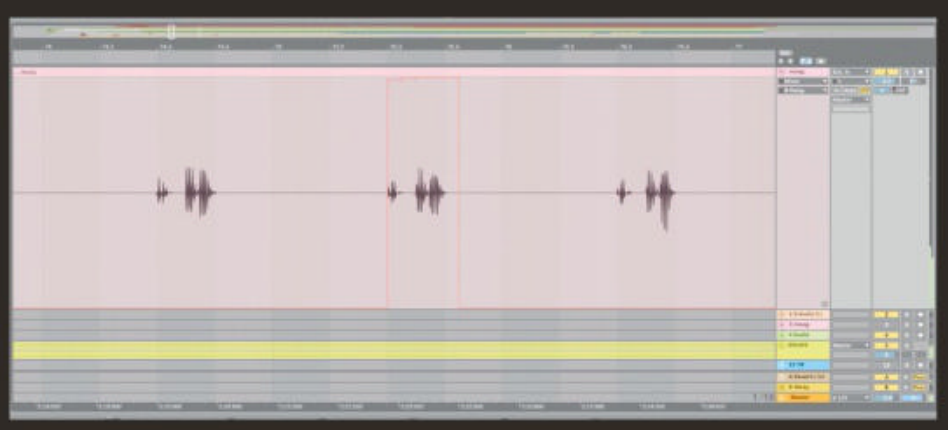
1 Reversing sounds can be a real 'get out of jail free card' at the arrangement stage. The sound's 'rising' nature means it'll smoothly sweep in, so it's great for patching gaps between song sections. Try flipping any atonal cymbal or 'impact' sound back to front for a riser effect, then place the audio so it leads into your build-up. Reversing also works well with tonal sounds such as vocals, chords or synths, as the harmonics of the sound will fade in and act as an additional melodic component.

Silence is golden

3 Use tiny gaps of silence to emphasise switches between eight- or 16-bar sections. For example, roughly truncate all your drums, bass and sounds just after the last snare of a bar, then whack everything in on the next downbeat.

Work with what you have

2 Place a creative effect (eg, an interesting reverb or delay plugin) on a return track in your DAW, then automate sends from your existing elements to shoot these signals into the effect and create spot builds and edits. Render the results and manipulate further for fresh FX material.

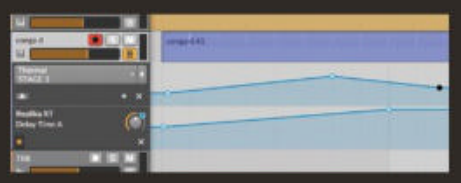


Emphasise an impact

4 If you're about to drop a new element into the track, think how you can lead it in creatively. If your hook is about to go in, say, why not fade in a repeating first note to introduce the hook more gradually? Alternatively, you may want to embrace the abruptness of your new sound coming in, in which case you can help the other sounds emphasise this. Perhaps volume-fade your drum bus, other sounds or master down a little in level before this impactful sound enters.

The washout

5 One of the most common yet creative ways to build and release tension in a dancefloor track is through the use of a 'washout' technique. This is where a particular sound in the mix – or the entire mix itself – becomes more and more effected with reverb or delay over time, building and building towards some kind of drop moment, whereby the entire effect is removed to slam everything back in.



What to automate?

6 There's pretty much no limit to what you can automate or modulate. Filter cutoffs are one choice, allowing you to 'reveal' a sound as you adjust the cutoff of a low- or high-pass filter. Volume automation is another one – even subtle changes in the level have an effect. Try automating the threshold of a sidechained compressor, to increase or decrease a rhythmic ducking effect. Or play with spatial awareness by automating the size, depth or dry/wet of a reverb or delay.

DAYS 22 TO 28

Mix and master

Aims:

> Mix your three tracks
> Apply DIY mastering to each track

The mixdown

Now that we've created our three tracks, our next step is to mix them and apply some DIY mastering. We can't tell you exactly how to do this. The needs of your track will be unique to the instruments and effects you've used, and precisely what sound you're aiming for. On these pages though, we'll offer up some broad advice, demonstrating some quick mixing tips and explaining a standard off-the-peg mastering chain.

8 tips for better a mixdown

REFERENCE!

1 Remember those reference tracks we compiled into a playlist in week 1? Drag those into your DAW to use as reference tracks as you mix and master. Use a spectrum analyser to compare the frequency content and dynamic range of these professionally mixed tracks and your own work.

GAIN STRUCTURE

2 Before you begin your mix session, it's worth considering gain structure. With classic mixing desks, the gain dial could act as a 'sensitivity control' for the potential level of each channel. In a DAW, we don't tend to have a dedicated gain control and, worse still, one of the ways manufacturers of third-party plugins attempt to impress us is by making presets sound loud. These factors can combine to create an overloaded mix output, even before you've add the rest of your instruments. Either insert a gain plugin at the top of each channel or build headroom into your mixes by dropping the level of all plugins by 6-8dB before you make any other mix considerations.

"HIGH-PASS FILTERS CAN BE AN EXTREMELY USEFUL TOOL BEYOND THE MORE SHOWY DJ-STYLE EFFECTS THEY'RE KNOWN FOR"

MIXING VS MASTERING

3 Slapping an 'output chain' on your master track as your ears grow tired is often hard to resist. But we'd encourage you to think of the process of mixing your track and mastering it as two separate projects. Of course, it doesn't hurt to check how your mix 'might' sound at the mastering stage as you go, but if your mix sounds very different and hugely unbalanced when you remove this chain, get rid of it and get the mix right first. The mastering stage isn't there to save a bad mix; it's there to enhance it. If your mix sounds good without anything on the master chain, that's half the battle won.

PAN AND WIDTH

4 Of all of the tools most ignored by DAW-based producers, the pan dial is too often overlooked. Place each sound in its own space and your mixes will benefit enormously. Similarly, adding subtle width with effects like delays or autopan can instantly make your mix sound a bit more 'pro'.

HIGH-PASS FOR BASS CONTROL

5 High-pass filters can be an extremely useful tool beyond the more showy DJ-style effects they're often known for. This is particularly true if you have a number of parts contributing to the bottom end of a mix and you're looking to do some sculpting. Let's suppose you've got a synth part with lots of low-frequency content. Adding in a high-pass filter with a 6dB/octave slope below 250Hz will just ease out unwanted content a little bit. This can help avoid bloat without audibly weakening the synth sound. Increasing the slope to 12dB/octave and raising the cutoff point will create a more overt effect.

EQ AFTER EFFECTS

6 Insert an EQ after every auxiliary effect you add. It's too much of a gamble to hope or assume the frequency response of a reverb will be a perfect match for your track. Be ready to scoop out unnecessary content from effects channels as well as instruments and audio tracks.

SATURATE YOUR DRUMS

7 Subtle saturation is the secret sauce that can help gel percussive elements and make beats feel 'warm' and full bodied. Trust us!

DYNAMIC EQ

8 Using an EQ to rein in troublesome frequencies is a standard technique, but what if these 'problem frequencies' change in volume through your track? This is where Dynamic EQs come in. These can apply frequency-specific compression to a sound that adjusts the attenuation 'dynamically'. Working with a synth line that gets a little too unruly as you crank the resonance? Set your EQ to match the spikes and set a threshold so that the volume only ducks when the input level gets too hot.

Setting up a standard mastering session

01 >

We start by importing our mix file into a new project. We're using Logic Pro but any DAW will work for this purpose. We've left 2dB of headroom in our mix file and we start by setting up DMG's Equilibrium. Any EQ which allows for precision frequency-targeting will work well.

02 >

We're keeping our EQ flat for now. Next we set up FabFilter's Pro-MB Multiband Compressor. This allows us to make individual compression choices for different areas of the frequency spectrum. We gently tighten sub and low-mid frequencies before taming a little harshness between 1.2kHz and 5kHz.

03 >

Next we set up iZotope's Ozone plugin. We start with the EQ module again here, making surgical, post-multiband compression choices to gently pinch frequencies at 1.04kHz and 1.97kHz. Settings here are subtle; anything needing dramatic tone-shaping would be better addressed at the mix stage.

04 >

We turn to Ozone 8's Imager module. This lets us tighten the stereo image in the lower frequencies while slightly opening them out in the three upper frequency groups between 430Hz to 2.23kHz, 2.23kHz to 10kHz and from 10kHz upwards. This makes the mix broader and deeper, increasing its presence.

05 >

At the end of the chain, we use Sonnox's Limiter to apply loudness maximising. We aren't looking to smash the mix, but instead to add energy and some additional Volume. We set the Output Ceiling at -0.01dB before adding 4.5dB of Input Gain adjusting Attack and Release times to suit the mix.

06

This is sometimes the best moment to return to the EQ in Step 1. If tone tweaks are required once the other effects have been added, it often helps to apply these at the start of the chain. We make subtle changes at the fundamental frequency of the kick, at the very top and around 2.5kHz.

DAYS 29 TO 30

Option 1: Self-release

Aims:

> Make our tracks available to stream or buy digitally

Track meet world…

OK so you've spent the last 28 days finishing your EP, and (we hope) you've got something you're happy to share with the world. So how do you do it? There's a somewhat bewildering array of options available to artists looking to share their music online these days, so we've rounded up a few of the best.

STREAMING SERVICES

Getting your music up on streaming services is called digital music distribution. This used to be the domain of big, multi-national record labels, but those days are long gone. Now, you can get your music in the hands (and ears) of fans using streaming services like Spotify and Apple Music with relative ease, and very little investment. Every distribution service is unique: some will charge you up front, some will take a cut of any earnings you make, but some are entirely free. Here's our pick of the bunch…

BANDCAMP

We love Bandcamp. In comparison to other music giants like Spotify and Apple Music, they're a pretty decent bunch, who seem committed to helping artists make money from their music, rather than just raking in profits at their expense.

Inverting the economic model that streaming services have created, in which artists receive only a small percentage of the money their music makes, Bandcamp takes only 10% of any earnings – the remaining 90% goes in the pocket of the artist. During the pandemic, they decided to waive their revenue share entirely for one day a month, called Bandcamp Fridays. Over the course of those 15 days, 800,000 fans paid artists and labels $61 million dollars.

For these reasons and many more, it's a great idea to set up a Bandcamp page to host and sell your music. That's not to say you should avoid streaming services entirely, though. Bandcamp is a brilliant alternative, but as it stands, it's not a replacement. It's not an easy place to promote your music or to be discovered, and most listeners aren't going to be consuming music on Bandcamp regularly. We recommend using the platform alongside one of the more conventional distributors mentioned above.

> "BANDCAMP TAKES ONLY 10% OF ANY EARNINGS – THE REMAINING 90% GOES IN THE POCKET OF THE ARTIST"

CDBABY

CDBaby isn't the cheapest option on this list. They'll charge you a fee per single or album released and take a 9% cut of royalties. However, they do offer a full-spectrum service that can help you tap into all available revenue streams as an artist, helping you get set-up with performing rights organisations and collecting publishing royalties, on top of sync licensing for film, TV and games.

DISTROKID

DistroKid is the only distributor that lets you upload an unlimited amount of music to stores after one payment, without taking a single penny from the earnings that music brings in. They'll get your music into Spotify, Apple Music, TikTok, Pandora, Amazon Music, Tidal, iHeartRadio, Deezer and more. They ask for a small upfront payment, after which you can upload any amount of music you want for an entire year to stores. They also make it easy for you to split payments with musical collaborators.

ROUTENOTE

If you're looking to distribute your music for free, RouteNote is the way to go. They'll upload your music to all major stores for absolutely nothing, but they will keep 15% of any earnings you make. If you don't fancy splitting your royalties, then they have a Premium tier that allows you to keep 100% of your earnings – but on this tier, you'll be charged for every release you distribute.

SOUNDCLOUD

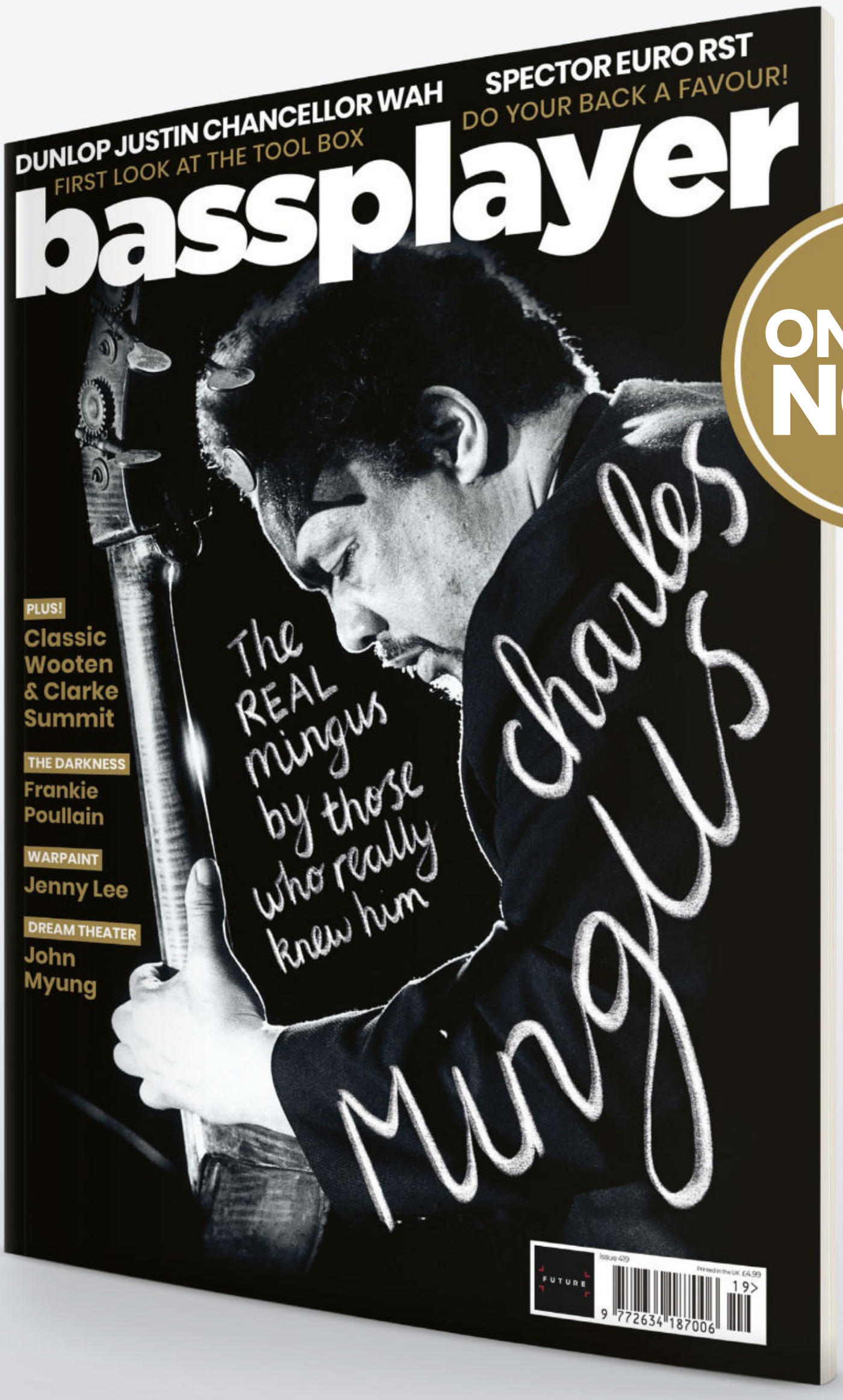
SoundCloud became hugely popular in the midst of the previous decade after fans and artists became enamoured with its unique platform, which offered a new way to share and discover music. The service subsequently played a pivotal role in launching the careers of a number of artists, including Billie Eilish, Chance the Rapper and Post Malone.

Though it began as a place to share your music – not to earn money from it directly – SoundCloud is now operating on a similar model to most streaming platforms, and pays artists royalties like they do. The key difference between SoundCloud and companies like Spotify is that SoundCloud pays what they call "fan-powered royalties", which come directly from the subscription fees and ad revenue that an artist's listeners generate. According to SoundCloud, this means that smaller indie artists with a dedicated fanbase can earn more on their platform.

YOUTUBE

Though it's seen primarily as a video sharing platform, YouTube is technically the world's largest music streaming service. It also happens to be the second most visited site on the web. If you're sharing a music video with your tunes, it's a real no-brainer decision.

And if not, there's still a good case to be made for sharing your music on YouTube, even as a basic video with the album art attached. If you fall in favour of the platform's algorithms, you could end up a fixture of the YouTube sidebar and gain thousands of new fans. Make sure you use a digital distributor alongside YouTube, though, as that's the only way you'll be able to monetise the music in your videos.



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DAYS 29 TO 30

Option 2: Pitch to labels

Aims:

> Get your tracks signed and released through an established record label

Sign me up!

Self-releasing music isn't for everybody. There's no doubt that it's becoming more commonplace as the music industry develops, and some might argue that in today's digital landscape, record labels are becoming increasingly irrelevant. However, many artists and producers are still choosing to release their music through record labels, while taking advantage of the multiple benefits this more traditional route offers them.

If your music gets accepted and released by the right label, it can be instrumental in launching your career. On top of contacts and connections in the right places, they'll likely have a PR team that will seek out opportunities for you to build your profile as an artist. Once you've signed a contract with a label, they've made an investment in your success, and they are likely to want to use every resource available to get your music heard, streamed and purchased by as many people as they can.

Signing with a label comes at a cost, of course, and they'll be taking a chunk of the earnings from any music of yours that they release. Before working with any label, you want to be reasonably sure that the benefits of your partnership – extra resources, increased exposure, industry connections and promotional opportunities – outweigh the slice of your earnings that you'll be giving away. So how can I get my tracks picked up by a label, you ask? If you're going to sit back and wait for them to come to you, it may never happen.

If you want to get results, you'll need to master the art of the demo submission. Sending music out to labels is the quickest and easiest way to get a chance of being heard (and signed), but it's not as simple as sticking a ton of .mp3s in an email and firing away.

We spoke with producer and label head Nic Nell, who produces under the name Casually Here and runs Algebra Records, an experimental electronic label that's based in London, for some essential demo dos and demo don'ts.

DO Reach out to the right labels for your music

"Make sure the label is a good fit for your music and that you're into what they're doing. Try and demonstrate that when you get in touch, to show that you've put some thought into it – small labels really are labours of love, and you're asking people to give time to listening to your music and to potentially invest even more time, energy and resources into releasing it. It's important to be considerate of that upfront.

"I've had records submitted that really have nothing to do with the output of the label – clearly people have just searched 'record labels' and submitted to everyone, which is a waste of everyone's time."

DO Think about your brand as an artist

"The more complete a vision you can present on the visual side, the easier it is to say yes, as aesthetics are a big part of a label. Get going on building your social media in whatever way works for you. It's unfortunately a big part of the game these days, and doesn't just have to be self promotion."

DO Show your support

"A good place to start if you really like a label is by engaging with them and their releases by being a fan and supporting them. Championing their music on social media and buying releases you're into on Bandcamp are easy ways of demonstrating genuine support that are likely to be noticed. Being generous and public in your support of other artists and labels really means a lot to people and people do notice."

DON'T Send them a folder of every track you've ever made

"Put your best foot forward with three strong tracks that are as close to release-ready as you can possibly get them, rather than a ten-track album of demos."

DON'T Feel you need to sound exactly like every artist they've signed

"Don't feel that your music needs to sound exactly like other music on the label, but think about whether your stuff could fit in coherently amongst a compilation of the label's artists. Labels don't want an infinite amount of the same artists that they already have, but at the same time they want to have their own character, taste and aesthetic."

DON'T Give up

"Don't be disheartened if you don't hear back immediately. It's worth following up a week or two later, as people might have forgotten to get around to listening. They might also like what you're doing, but not have the time or space to put that record out. That doesn't mean you can't send more music in the future and keep them in the loop on your progress." FM

"THE MORE COMPLETE A VISION YOU CAN PRESENT ON THE VISUAL SIDE, THE EASIER IT IS TO SAY YES, AS AESTHETICS ARE A BIG PART OF A LABEL"

18+

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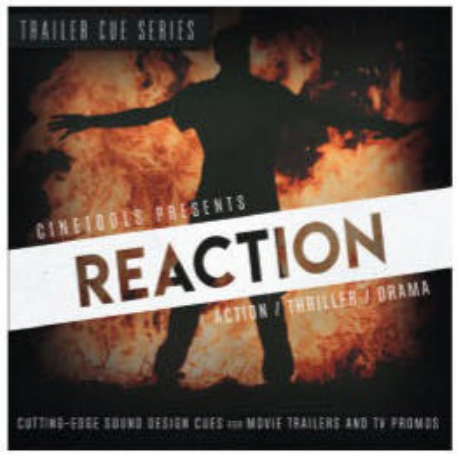

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SALLY SHAPIRO

After disbanding in 2016, Swedish italo-disco/ synthpop duo Sally Shapiro returns with a fourth album. **Danny Turner** discusses synths, pseudonyms and the making of *Sad Cities*

© Freda Klingberg

Influenced by Swedish pop and Italo disco artists such as Valerie Dore, Lili & Susie and Katy Gray, work colleagues Sally Shapiro and Johan Agebjörn joined forces to release their heralded debut album *Disco Romance* in 2006. Further albums, *My Guilty Pleasure* (2009) and *Somewhere Else* (2013), sustained interest in their elegant, melancholy synthpop sound despite Shapiro's low-key public persona and choice to eschew playing live.

By 2016, Shapiro and Agebjörn's musical tastes had begun to drift and the project was seemingly over. However, the last five years has seen them working in seclusion with various co-writers including Electric Youth, Highway Superstar and Tommy '86. Despite Shapiro's preference for keeping the music industry at arm's length, the duo's sumptuous melodies and expertly crafted songwriting ensures that *Sad Cities* is an early contender for synthpop album of 2022.

Sally, people often tell us that you're very shy, so what made you want to take part in the extrovert pop industry?

Sally Shapiro: "When I recorded the first song that I made with Johan I didn't realise that he'd send it out to a lot of different online forums. Had he asked me if I wanted to be a pop star I would have probably said no, I don't want to do that *[laughs]*. We just made the record for fun, but it got a nice reception and people liked it, and since I don't feel the need to perform live and we've never done any TV shows, it feels OK for me to just make recordings."

Sally Shapiro is not your real name. Does it feel more comfortable using a pseudonym as a mode of expression?

> "WE WORKED FOR QUITE A LONG TIME ON NEW MUSIC WITHOUT ANNOUNCING ANYTHING, WHICH WAS GOOD BECAUSE WE DIDN'T FEEL UNDER ANY PRESSURE"

SS: "I didn't feel comfortable using my real name and found that it's much better using a pseudonym, which makes me feel more confident at doing what I do. When I sing as Sally Shapiro it's a mixture of writing lyrics about things that are very personal to me and the identity that I created. Sometimes it's easier to say things out loud when you're not using your real name, and maybe that's why there are so many anonymous artists around today."

Johan Agebjörn: "If you want your music to have artistic value, it has to be grounded in some part of yourself, so we always feel that the themes that we explore as Sally Shapiro are saying something about that self-expression."

Coming from Sweden, would it be too obvious to say that you were inspired by Abba?

SS: "When I was young I was mostly listening to artists like Lili & Susie – a 1980s pop band that sounded a little bit disco; like Bananarama, but Swedish. The return of Abba came as a surprise to us, but I think they've pulled it all together very nicely. Because I am not performing live, I like what they have done with their avatars – appearing as a hologram sounds quite appealing to me."

Johan, you also prefer to be in the background. What sparked your interest in synthesis?

JA: "I was a fan of the Pet Shop Boys and identified more with Chris Lowe – the guy with the baseball cap in the background playing the keyboards. When I was young, there were a lot of music shops in my city and I used to stop by and test different synths. I wanted one that sounded similar to the music that I wanted to make and thought the Yamaha PSR-3500 was a pretty good option, so I sold my Commodore 64 computer and saved all my Christmas and birthday money to buy it. I still use it sometimes because some of the percussion and bass sounds still sound very cool – it's been a lifetime companion."

You're both big fans of Italo disco. How do you think that genre is differentiated from everyday disco music?

JA: "A lot of Italo disco is quite upbeat and happy, but both Sally and I like artists like Valerie Dore, Miko Mission and Savage who had a more melancholy style with very beautiful pad sounds and sad lyrics. That really grabbed our attention and we also feel that, today, there aren't many people making this style of Italo disco so maybe we need more of this kind of music."

Up until 2016 you'd released three albums but decided not to move forward with the Sally Shapiro project. What brought you back into the studio?

JA: "In 2016 we felt that we were going in different musical directions. I was moving towards ambient, trance and experimental instrumental music and Sally was more interested in making guitar-based pop. We didn't feel inspired and thought Sally Shapiro had probably had its time as a musical project, but after a while our feelings changed. We found some new inspiration and rediscovered the joy of making electronic pop/disco music – and then we started to question why we ever ended the project. We worked for quite a long time on new music without announcing anything, which was good because we didn't feel under any pressure and didn't have people asking us all the time when the next release would be out. We just worked on new material and at some point in the journey contacted the Italians Do It Better label to release new music."

Had you noticed that the music industry had changed a lot during the time you spent away, and was that a concern?

SS: "I haven't noticed that but I'm probably not the right person to ask because I don't have a lot of insight when it comes to the music industry."

JA: "I've always liked having a physical product to accompany the music, so the digital shift is something I feel a bit sad about. I released a solo album earlier this year and discovered that I couldn't give the CD to that many people because most of them don't have CD players anymore. I've also noticed that most of the power has transferred to those who decide what goes on a Spotify playlist and blogs are less important these days. Our career was given a big push because of all the MP3 blogs back in 2006/07, but now things are very different. Thankfully, our record label understands more about all of that than we do."

So with this fourth album, *Sad Cities*, did you feel there was something left unsaid or that you might approach your sound from a different angle?

JA: "It was only after we listened to the new album that we realised that something about our sound had changed. It does sound a bit different in terms of the production, for example, there are a lot more mid-tempo tracks. We didn't want to do the same thing again, so it was important for us to make the album more varied but I'm not sure whether that decision was a conscious one."

Sally, is the writing process as simplistic as waiting for Johan to provide a demo for you to work on?

SS: "The starting point for me comes from Johan, who might create a demo for me that doesn't have any lyrics but just comprises some basic chords or melodies. It's rarely a completed track, so I'll usually just listen to that, tell him if I like it or not and for those tracks that don't already have a co-writer we'll discuss what the lyrics might be about."

JA: "Sally still doesn't allow me into the room when she performs vocals, so it's always a very exciting moment for me when I get to hear what she's recorded. We usually spend a couple of days recording each track. On the first day, Sally will lay down the vocal and I'll listen to it and offer some comments before Sally records the vocal one more time."

"IT WAS ONLY AFTER WE LISTENED TO THE NEW ALBUM THAT WE REALISED THAT SOMETHING ABOUT OUR SOUND HAD CHANGED"

© Jonas Lovendahl

Has what you sing about changed over the years, particularly in the light of the current pandemic?

SS: "Despite the pandemic I don't think the mood of our music has changed much. Of course, it affects you personally to know that people have been dying, but I am quite lucky not to have been affected by that, and it's not affected our career as artists because we don't go on tour."

JA: "Since we're friends and we live in the same city we have always met and played music together, so things are not much different now to how they used to be. The album title actually has a bit of a double-meaning. On the one hand we have the track called *Sad City*, which is about people being tired of living in a particular city, but it's also saying something about the pandemic because, before, all of these cities were pulsing with life and that's changed now. We are quite introverted, but some artists are forced into being extroverts and I would imagine that the pandemic has affected those types of artist more."

What are you usually using to help initiate the demo writing process?

JA: "It's usually different from one track to the next. Sometimes I have a chord sequence that really inspires me, other times it might be a sound or a short melody. I also work with a lot of collaborators and co-writers, so the starting process can be quite a dynamic one. I use both hardware and software synthesisers, but once everything is recording in the computer I tend to produce the tracks in a lot of different environments. I might work on them on the train on the way to work or sometimes I'll mix or edit stuff when my kids are falling asleep next to me. Since I have three kids it's difficult to find the time these days, so my approach is often quite pragmatic, but I'm always thinking about music so when I sit down to produce I already know what I want to do."

What does your gear setup look like, Sally?

SS: "No, I have nothing like that at all, except for a piano and the Casio MT-52 synthesiser, which I got from my dad when I was 10. I still have it because I think it's nice and sweet and fun, but I'm not the production type.

JA: "I use Sally's keyboard sometimes because it has some really sweet electric piano sounds. I actually released an album in 2015 called *Notes* that used her MT-52 keyboard on almost every track."

We noticed you have the TAL-U-No-LX Roland Juno-60

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emulator. Would you say that you're more into software emulations than hardware?

JA: "It's a very good little soft synth that's easy to understand and program. It can do these very warm Italo disco or synthwave dance sounds and has two choruses that make it sound really atmospheric. It's probably my favourite soft synth at the moment, so I used it on many of the album tracks. Although I haven't compared it to the original, mostly I'm quite happy to use soft synth emulations. If I want to get them to sound a bit more analogue I'll use various tape compression techniques to make it more organic."

It seems that a lot of your sounds are based on samples from vintage hardware?

JA: "In the beginning I didn't have much money so it was a cheap way to start. The first thing I bought after the PSR-3500 was a Roland DJ-70 sampling workstation. When I first used computers to make music, controlling something was always done using a sampler and I started sampling a lot of different synthesisers, instruments and drum sounds from vinyl. I still work a lot with samples and think the sampler is a fantastic instrument. Sometimes I'll record something to tape and resample it just to get a bit of character or noise from the tape recorder and then maybe I'll translate it one or two octaves down to create some cool effect. I also have waveforms from the Roland TB-303 that I like to put into the sampler and use the sampler's filters to change the sound. For example, on the track *Tell Me How*, when you hear the 303 it's a real 303 waveform filtered through a sampler."

Are you deliberately avoiding flashy modern sounds in favour of melancholy, vintage sounds?

JA: "That's probably a reflection on a lot of the music that I listen to. I'm less interested in whatever's in the charts and the new music I listen to is often very retro. The track *Million Ways* is a good example of how I prefer to use vintage sounds in my productions because it was inspired by Italo house and a lot of the 909 snares and Korg pianos that they used to use back in the '90s."

Overall, your choice of sounds is primarily focused on serving the song. Do you feel that electronic artists are a little too fixated on technique over good, solid songwriting?

JA: "I'm glad you said that because I agree that there's too much focus on production and too little focus on songwriting within electronic music these days. That's why it's really good to have Sally with me on this project because she'll refuse to sing something if it's not good pop music. She has a good ear for that and the co-writers I work with have an ear for good songs too. Personally, I do like to make abstract electronic music, but that always goes into my various solo projects."

SS: "I also prefer to return to the classic pop sound and have less interest in listening to modern electronic pop music. I still listen to what I listened to 30 years ago. Over the last few months I've been listening a lot to The Smiths and some classical and piano-based music. I don't really listen to much disco, and maybe that's because we've made this album. Because I've been listening to disco a lot lately, in my spare time I prefer to listen to something completely different."

Is Morrissey a lyrical influence?

SS: "I find that lyrics are always quite important to listen to and obviously they're very important for Sally Shapiro. Even though my lyrics may sound very melancholy and naïve, they

JOHAN'S GO-TO GEAR

Roland JD-800
"Digital synth from the early '90s used a lot by ambient artists like Pete Namlook and Klaus Schulze. It's wonderful for pads, such as those on our track *Fading Away*."

Daichi Laboratory Synth1
"Free software synthesiser with great possibilities for brass and bass sounds with an '80s feel."

Pioneer TORAIZ AS-1
"An affordable synthesiser with analogue synthesis and great possibilities; it can sound very Kraftwerk, for example. Basically, it's a monophonic version of the polyphonic Sequential Circuits Prophet-6."

Yamaha PSR-3500
"My first keyboard, which I still use because it has some nice bass and percussion sounds with an '80s feel, but very nostalgic. Our newly-released 1994 instrumental version of *Forget About You* was made 100% with this keyboard."

Reason 11
"This started as a pretty limited DAW but now quite extensive and with VST support, MIDI and recording options. Very stable and easy to use, it has never crashed for me, and I really love the reverb options it has."

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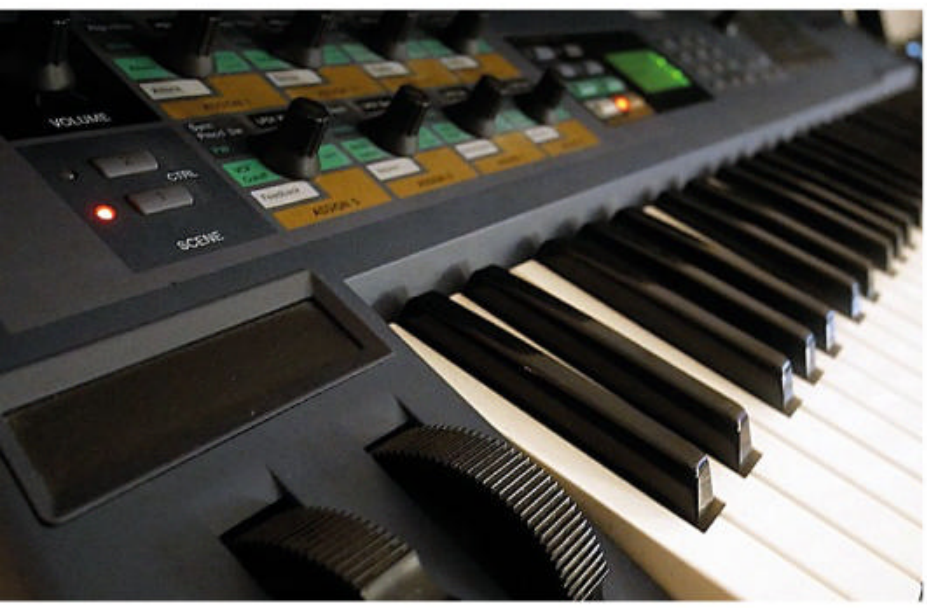


are from the heart and I hope they appeal to what people might feel but not always say out loud. Our co-writers often bring lyrics with them, but we'll often modify those so the process is very different from track to track."

Can you tell us about some of the collaborators you've chosen to work with on *Sad Cities*?

JA: "We collaborated with Electric Youth for the track *Starman* on our third album and think that they're really good pop writers so we asked them if they'd be interested in contributing or whether they had any track sketches they'd like to offer us. Austin (Garrick) got back to me with a loop, some chords and a few simple melodic elements and we built the track *Love in Slow Motion* from there. In 2014 we collaborated with Tommy '86 on a track called *Why Did I Say Goodbye*, which became a bit of a viral synthwave hit and he's also made some remixes for us that we really like. In his case, he sent some chord sequences that we built on."

How did you meet Alex Karlinsky from Highway Superstar?

JA: "He'd also done a few remixes for us and asked if we'd like to make a track together. He sent a verse that we built up and kept working on together until we had the finished track, *Down This Road*. We're really happy with that one so it's going to be released as a single in a couple of weeks."

"PERSONALLY, I THINK THAT HOW THE ROOM LOOKS OR THE SPACE THAT YOU'RE IN AFFECTS THE WAY THAT YOU APPROACH THE RECORDING OF MUSIC"

You seem to switch between using two DAWs, Reason 11 and Cubase Elements 7?

JA: "Reason is where I put the instrumental and use Cubase for recording, editing and mixing vocals. Reason's not quite as handy at editing or handling vocal recordings as Cubase, but otherwise I'm a fan of it and think it has really good effects, reverbs and is quite easy to use. Now it's also got VST support so I can use the TAL-U-No-LX Juno-60 emulator and the Full Bucket Mono/Fury plugin, which is a really good simulation of the Korg Mono/Poly analogue synth."

What's your collaborative process like?

SS: "We feel it's important to write and record the music in the same room together. I always record vocals at Johan's studio and he prepares everything and makes sure the music is all set in terms of the parts I should sing. Taking into consideration my other answers, you might be surprised to hear that I am quite involved in the mixing process. I don't know so much about all the different drums and instruments that Johan uses, but I can hear whether something sounds good or not. For example, if I feel there's too much treble on the high end of the spectrum I'll sit down with Johan and make some comments on that, but usually my comment will be that the vocal should be louder and the drums lower *[laughs]*. Sometimes I'll ask for sounds to be taken away if there are too many competing with each other."

JA: "I also have a summer cottage where we recorded a few songs, which is mostly due to logistics. I spend most of my summers there, so it's quite convenient, but we find that playing in another environment also tends to affect our sound. Personally, I think that how the room looks or the space that you're in affects the way that you approach the recording of music, so we did end up having had to re-record some of those songs because we felt they sounded different from each other."

Does that primarily relate to vocals where there may be some external noise depending on the recording location?

JA: "Because we're not doing live ballads it's not super-important to record in a completely silent room – if there is some noise it will usually get masked by the other instruments, but sometimes noise bleeds through so we might use noise cancellation software on the vocals."

What are you using when it comes to recording beats?

JA: "I use a lot of sampled drums sounds from a library that I've been collecting for 20 years, but I also collaborated with Johnny Jewel for a lot of the beats on this album. If he thinks a track should have a fat 909 snare, he'll record that and send it over or sometimes he'll play some of his Simmons SDS 8 pads. Otherwise, I'm mostly using Linn Drum samples, the usual Roland 606, 808 and 909 beats and a lot of Simmons snares and sampled sounds from different records. I also mixed the album with Johnny over Instagram, which involved metres and metres of detailed conversations."

Would it not be easier to give Johnny a version of the track to work on?

JA: "I prefer to make the changes based on his remarks. 90% of the time I agree with him, but sometimes I don't. Sally also agrees that everything sounds more cohesive after we mix the tracks that way."

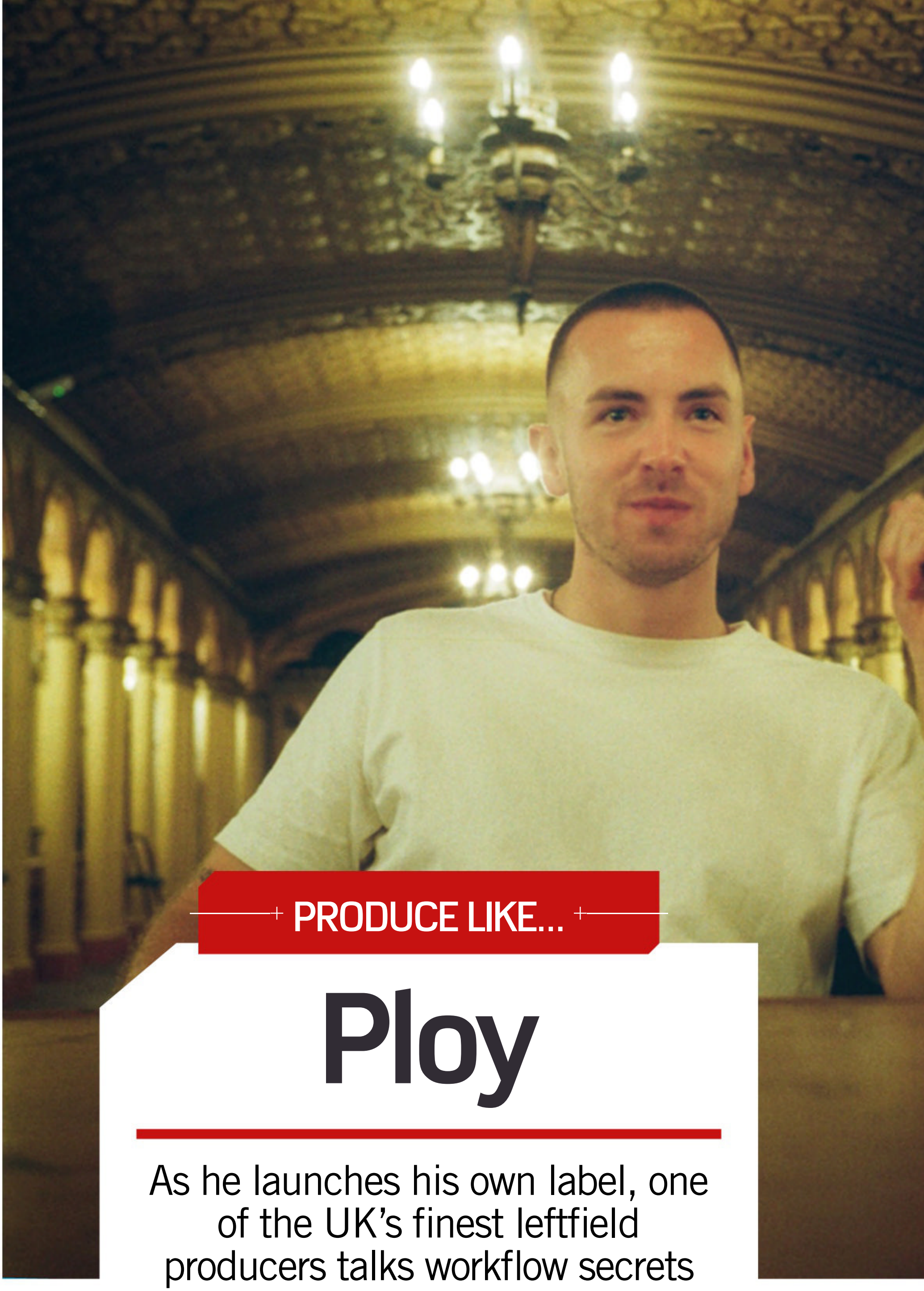
Having taken a break from making music together, have you noticed that *Sad Cities* has benefitted from the project's reprisal?

SS: "I'm very happy about the album because we came to it with a new energy. Maybe it's too early to say if it's better because we've lived with the music a lot recently, but I think that the songs are more thorough. Maybe after a year or two I'll have a different answer, but right now *Sad Cities* does sound different to our other albums."

JA: "It's probably good that there were a few years between the third and fourth albums because we encompassed a lot of influences during that time. We talked about the fact that it's less reliant on sounds in the higher spectrum, which means the album is more based on vocals and drums and less on hi-hats and trebly sounds. So the sound is a bit different, which we feel is refreshing, but it's always difficult to be objective about the songs themselves. When you work on an album you listen to it so much that in the end you're quite tired of it. From that perspective, it's always fun to listen back after a few years and hopefully think, wow, it's actually quite good!" FM

WANT TO KNOW MORE?

Sally Shapiro's new album *Sad Cities* is out February 18th on Italians Do It Better. For more information, visit **johanagebjorn.info/sally**



PRODUCE LIKE...

Ploy

As he launches his own label, one of the UK's finest leftfield producers talks workflow secrets

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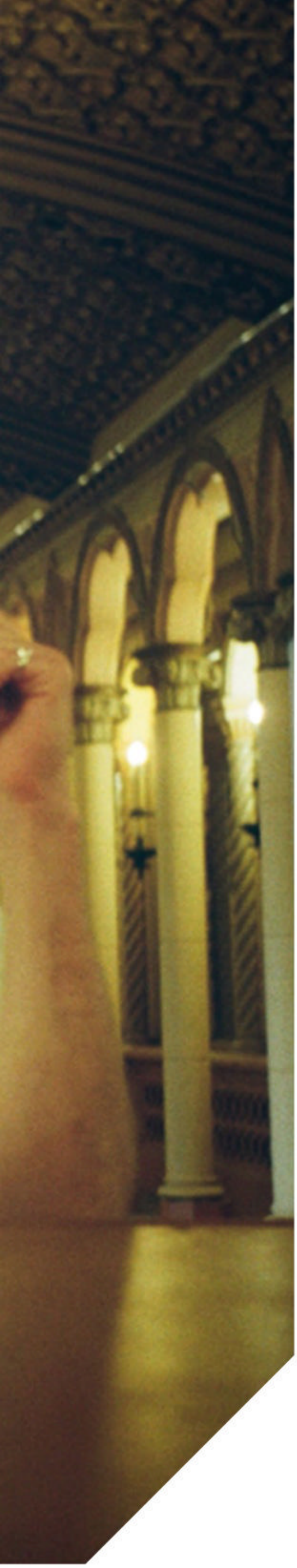
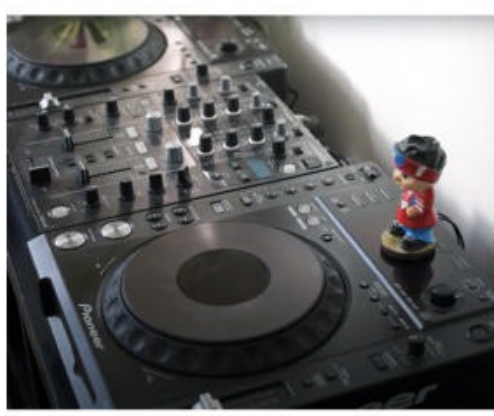


Ploy's minimal but effective studio



Over the course of the past decade, Ploy – real name Sam Smith – has carved out a reputation for himself as one of the most innovative artists in the UK underground. His club-centric sound, which combines elements of dark British techno with numerous global percussive diversions has seen him land on lauded labels like Hessle Audio, Hemlock, Timedance and L.I.E.S.

Following the Covid period, he's recently returned with a new label and party series, both named Deaf Test. The label launched late last year with Ploy's own Bollywood-sampling *Rayhana* EP. To mark the occasion, we visited his South London studio…

Why did you choose to launch your own label now?

"It was just to set up my own platform, really, so I could have full control. You reach a point where you do stuff for other labels – they're good springboards, especially when you're getting established, as they push you further, which is what you need at the start – but after a while you come to the conclusion that you can do all this yourself and have full creative control. I'm a bit more established now, so I just wanted that foundation to build my own thing on, rather than always being associated with someone else's label."

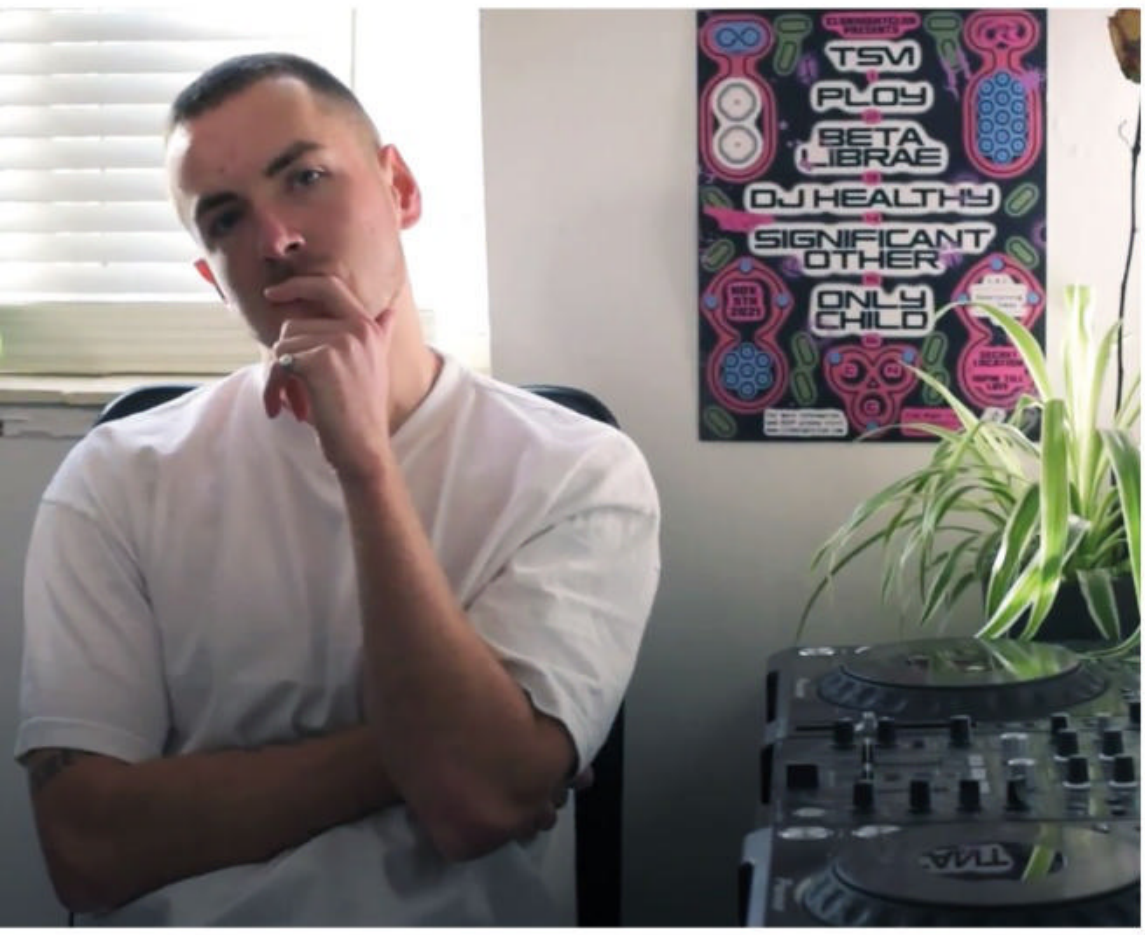
Deaf Test is also the name of a club night you've been running recently…

"Yeah, I'm doing a party with the same name. They started in 2021. This was all pandemic thinking, basically. It's all stuff that I'd always known I'd wanted to do in the future, but I wouldn't have got around to it because I've always been so busy with gigs and stuff. But because everything slowed down it gave me a chance to work this stuff out. I wanted to go back into normality with some sort of plan."

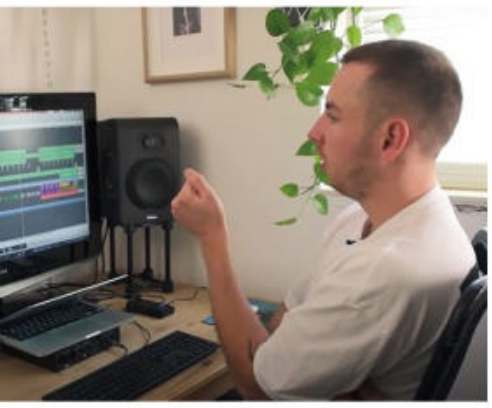
Is there any specific thinking around who you put on at those nights?

"I just wanted to push a very particular sound and aesthetic that represents all of my interests. That's a similar ethos to the label too, basically. It's about drawing on influences I feel are a little underrepresented, and trying to make it more coherent."

Do you plan on using the label as a platform for other artists then?



Ploy's new Deaf Test label and club night offer a chance for him to take more hands-on control of his output



"I haven't got that far yet, right now I've just got a lot of material from me that's ready to go. But I do want to do a collaborative project too, which will involve pushing out of dance music a little bit more and working with other artists – vocalists, instrumentalists, other producers – to do another album-sized thing. After the next record that's what I'll be working on. But after that, it depends, I guess. I'm certainly not closed off to that idea."

What sort of sounds would you aim to explore away from dance music?

"I think the themes are still going to be quite rooted in the dance music world, but up until now I've just made a lot of club music. A lot of it's quite 'tool-y'; not really home listening stuff. It works well in big clubs but doesn't really translate that well away from that situation. I want to do something a bit more, I guess headphone-y.

"Dance music isn't the only thing I've ever listened to or been interested in, so it would be nice to explore more of those influences. I sample a lot, so usually that's a major part of the production process. I'm drawing from a lot of other areas in that sense anyway, but I guess I want to bypass that stage and explore those sounds more directly."

How much has your process evolved since your first tracks?

"It's pretty different, I'd say. When I first started it was mainly sampling, with a few little production processes around that. I still use that as a starting point, but it's way more refined. It definitely takes me longer now. I've got to a point now where the source sample I start with isn't necessarily the main part of the tune. Sometimes it doesn't even end up in the finished track, it's just used as a backdrop to other sound design. It's certainly more of a detailed process.

"At the time I first started putting out tracks I was studying for a music production degree. A lot of stuff I was learning then I wasn't actually implementing in my music as much as I am now. I guess I'm retrospectively taking that stuff in and applying it now."

> "I WANT TO DO SOMETHING A BIT MORE, I GUESS HEADPHONE-Y"

Did you start creating music around the time of doing that course?

"I think the first record I put out as Ploy was just after I graduated from that course. I'd been in college for two years before that, doing music technology, and I spent most of that time trying to write tunes. When I was actually at university that kind of distracted me from writing tunes. It's a bit of a funny one, as the course was quite theoretical, which was really useful, looking back on it now, but at the time I just wanted to be writing records.

"It was probably about six months after that I got my first record signed. That was basically just a sampled loop that I put some drums under, it was very basic stuff. But the idea was good, I guess."

What were you listening to then?

"Loads of house music. When I was about 18 I got massively into Theo Parrish and Detroit and Chicago stuff. I think because I'd spent so much of my life listening to hip-hop and R&B, when I heard that stuff not long after it sounded the same but in a dance music context. There was a big resurgence in the UK around that time too. But before that I'd been listening to stuff like dubstep and drum & bass – the usual stuff you get into growing up in the south west. That first record I released was more of a house record. That was under a different alias though."

What led you to move away from continuing using that house sound in your own tracks?

"I started to get a bit bored of the process of writing that music, and I wasn't really getting many demos signed after that first record anyway. A lot of it didn't really sound very original anymore. I started thinking more about my own identity as a producer too. I've got no connection with that Chicago or Detroit house scene. There was quite a funny interview with Ben – Beneath – around that time, where he said, 'If you're writing that kind of house music and you're not from Chicago or something, that's bait.' I remember thinking, 'yeah, that's right – why am I writing these tunes when it's nothing to do with me?'"

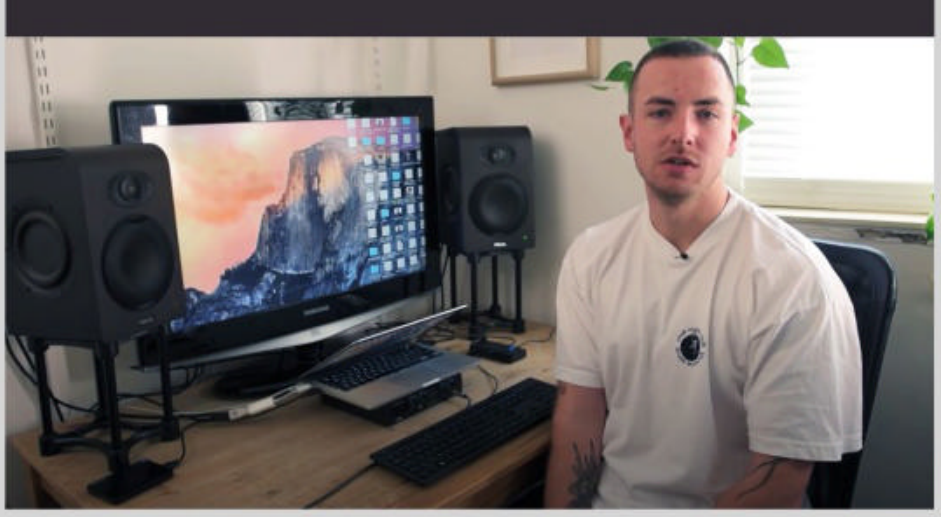
GET THAT SOUND...

Achieving *Garys*' tension-building Shepard tones

VIDEO ON FILESILO

01 >

The seemingly ever-rising tones in Ploy's track *Garys* provide masses of energy, which works great on the dancefloor. Although effective, it's a fairly simple technique. "It's quite easy really," he tells us.



02 >

"I use the PhasedMistress plugin which is part of the Soundtoys pack," he explains. "But you can do this with anything that lets you play with resonance and the frequency of that resonance, which is what's being automated to make the pitch shift."

03 >

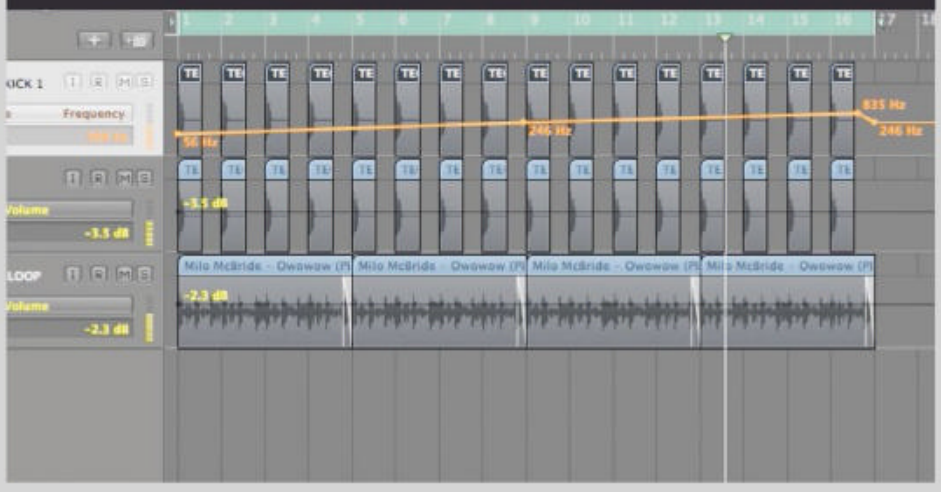
Sam turns the resonance up to full, to create a self-oscillating feedback tone, and removes any modulation. "You can trigger the sound with anything," he explains, "but I tend to use a kick drum."

04 >

This creates a constant static tone. Sam uses a little EQ to tame this, and a compressor sidechained to a kick to add movement. "If you want some of the original trigger sound you can adjust the wet/dry but for me I just wanted the tone completely by itself."

05 >

The sound comes to life when Sam starts automating the pitch of the resonance. He draws in upward modulation curves which creates the propulsive effect used in *Garys*.



06

He finishes the sound off with a touch of chorus and some more EQ tweaks. "It's quite an effective way of increasing tension," Sam explains. "You can use it in small amounts, although my idea was to have it rising through the entire tune."

PLOY TRACK BUILDER...

Reshaping a Bollywood sample into a leftfield club banger

RESAMPLING

VIDEO ON FILESILO

"Usually I start with a sample I've found. I like to use that as a jumping off point, because I'm not strong on melody. It makes a nice basis to build a tune around, which I can refine during the process. Sometimes I'll keep the original sample and sometimes not.

"Take *Dark Lavis*, the B-side to my *Rayhana* EP, as an example. The original sample comes from a Bollywood film soundtrack. I dragged it into Logic, then imported it into iZotope Iris. That's quite an easy plugin to get ideas going with.

"I'll use Radius RT mode, which means the original tempo of the sample is kept. That one was pretty easy to work with; I put it at a lower pitch, zoomed in and just looped it up properly.

"The key is finding the right pitch that you want to use it at. Then I'll edit the start and end points so that it's nice and refined. You can even put a bit of release on the amplifier envelope and put a bit of decay on it, to make it feel a bit more natural. Once I'm happy I'll record it down to a new audio file. That's generally how I resample something, then that becomes the starting point of the track and provides the melody."

REWORKING THE SAMPLE

"I don't just want the sample running throughout the whole thing, so I'll often double it up and apply different processes to manipulate the sound a bit. A good thing for that is Tremolator, from the Soundtoys bundle. You can play around with that and rework the sample into a lot of different patterns.

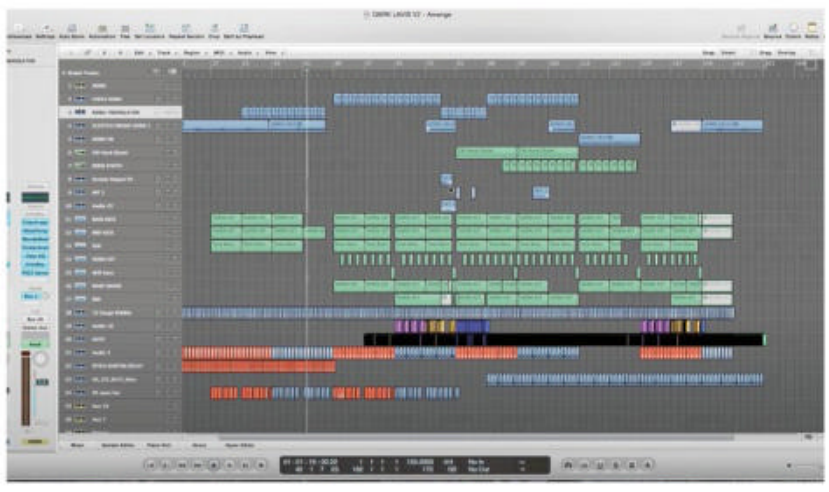
"Once you've manipulated your samples you can start building your track on top. For *Dark Lavis*, I took the version of the sample with the tremolo on and used that in the intro, with staccato plucky sounds. Then the less effected sample comes in for the main body of the track.

"I then also took the same sample and put reverb on it to turn it into a drone type thing. I like to do that by feeding back reverb – creating big infinite spaces – and then bouncing that down in the same way as before. In the end *Dark Lavis* has three different sections that have all come out of the same sample. I've structured the tune around those."

> "THE TRACK HAS THREE DIFFERENT SECTIONS FROM THE SAME SAMPLE"

ADDING DRUMS

"My next step is to start putting some drums on top. I like to layer my kicks up with at least two layers, generally. The low-end part is quite bassy so needs a bit more body in the mids. Then for



the higher part I'll roll off the low frequency so that it's not clashing with the bass. On *Dark Lavis* there's an even lower sub bass.

"The lowest layer has high frequencies rolled off to about 500Hz. Put together you've got good low-mids layered with the sub. That gives plenty of body in the kick, so there are no other bass elements.

"That sits under the main sample and is slightly sidechained so that the ducking adds to the rhythm. It adds a bit more groove that way.

"Next I put a snare in. With *Dark Lavis* that's sat on the kick drum for more of a dancehall rhythm. Then I'll layer percussion. Sometimes I add percussive loops on top. Or build other rhythm sections out of percussion hits and bounce them down into the track. I'll cut and resample them and loop them up.

"So with *Dark Lavis* a little percussion section sits under the kick and snare – with quite a rolling feel. There are a few rhythmic hats, in little 16th hits, for extra roll too."

MIXING WITH SPACE AND HEADROOM

"Once the track's finished I'll mix down all my own stuff. I also do mixdown work for others. The most basic thing to watch for is gain structure and staging. I'll bounce down every element to audio, but ensure nothing is in the red or clipping. I'll add in bits of compression at this stage. It's about layering compression, not using loads in one go. That way you've got lots of headroom in the mix. If everything is too hot and you're having to pull all the faders down, or use heavy compression, it won't sound as good.

"Also, use the space in the mix creatively. You can get little spread plugins that can move certain frequencies around in the stereo field, which is useful on pads. But just panning is a simple tool for opening the space up, particularly when you automate it." FM

WANT TO KNOW MORE?

Hear Ploy's latest exploits and touring news at **soundcloud.com/deejayploy**

Ploy's DJ sets tend to blend elements of techno with more ecclectic global rhythms

BEHIND THE DECKS...

Tell us about your DJ setup...

VIDEO ON FILESILO

"My tech rider at the moment is CDJ2000s or 3000s if the club has them. Usually with an Allen & Heath mixer, a Xone:92. I don't play records these days really, because it's kind of long-winded taking them out and the setups normally aren't really good enough. Occasionally if it's a club I know has a good setup I might take some records out, but not often. I find it more creative to mix on CDJs anyway. The way I mix is dependent on what I'm playing, really. If it's more of a techno set, the transitions and blend might be a bit longer and more in keeping with that kind of style. For example though, if I play more global stuff like dancehall or fast tempos then it tends to be a bit choppier in terms of the blends. I try and incorporate all of that stuff when I play though, and try to fit it together and contextualise it. That makes it a bit more interesting."

Minimoog Model D

Tefty helps you master the world's most iconic synth – in hardware, software or emulation form!

The Minimoog is arguably the most recognisable synth of all time. It's also considered to be the first "classic" synth. It set the standard for future synths to follow and opened up a whole new world of sonic exploration.

How old is it? Over 50 years. The first model was in production from 1970 for just over a decade, until it stopped in 1981. More than 12,000 units were made during that first era of production. The company, RA Moog Co, only expected to sell 100 of them! Another fun fact is that the Minimoog was the first synth to feature a pitch wheel! Standards were set with this legend.

After the 1980s, there was a rocky period for Moog synths. It wasn't until the late '90s that an updated version would hit the market. Most recently, Moog Music manufactured a reissue of the Model D from 2016 to 2017. Production had to stop because they were running out of parts faster than expected, due to the popularity of the synth.

There have also been tons of unofficial (and official) software versions of the Minimoog created. In our walkthrough guides here, we're exploring the fundamentals using Behringer's affordable and faithful Model D, but the principles work with any Model D, original, cloned or emulated!

What's so special about the Model D, then?

It comes down to fat, analogue bread and butter sounds, combined with a simple and straightforward interface to program and tweak. A faithful reproduction has no effects. It's just pure synth tones. Obviously adding reverb and delay enhances the instrument tremendously, just like any guitar benefits from effects. The original didn't sync the oscillators (due to a voltage design) which inadvertently created a fatter-sounding synth. Since the oscillators tended to drift, the synth produced amazing analogue warmth, leading to iconic bass and lead sounds.

Nowadays, we're spoiled for options. Behringer has created a super inexpensive Eurorack-compatible version of the Model D, and it sounds incredible. Roland even made the SE-02 which is inspired by the Model D, with some nice extras.

Fig.1

Creating a classic Minimoog bass

Creating a simple bass patch will get you familiarised with the panel easily. **(See Fig. 1)**

The first knob on the left is your tuning knob. This controls the first oscillator. Even the Behringer Model D version drifts in pitch, so you'll have to tune your Model D as your studio heats up over time (unless you're using software!)

PRO TIP

Turn on your Model D about 20 minutes beforehand to let it warm up to operating temperatures. If you tune it first thing when it starts up, it'll be out of pitch within a few minutes.

Below the tuning knob you have options for glide and modulation sources/destinations. Let's keep 'glide' set to zero for now. Moving to the right of the 'Controllers' section, you have your bank of oscillators. Oscillator 2 and 3 have separate tuning knobs that are relative to oscillator 1's tuning.

All three oscillators have ranges that span from 'LO' (which is LFO territory) all the way up to 2'. The "feet" markings represent organ pipe lengths. So a 32' pipe is going to produce a low bass tone and the two-foot pipe length produces the highest pitch. It's old school.

Each oscillator can choose between six waveforms. The last three shapes are variations on square waves, with different pulse width values. What we love about the Model D is that we can make a fat bass out of any of the waveforms. Typically we'd say "here's the sweet spot" for bass on

"WHAT WE LOVE ABOUT IT IS THAT WE CAN MAKE A FAT BASS OUT OF ANY OF THE WAVEFORMS"

Fig.2

a different synth. But they all shine on the Model D.

Setting the oscillators

So here's what we'll typically do for bass. Set the first oscillator to 32' and pick whichever waveform you're in the mood for. Let's start with the first square wave (position 4). **(see Fig. 2)**

Oscillator 2 we set to 16' (one octave higher than osc 1) and waveform set to square 2 (position 5). Slightly detune the pitch as well. Don't go too far. Just enough to create a slight difference from the first oscillator.

Oscillator 3 is basically the same as Osc 2, except choose the sawtooth waveshape (position 3). Also, detune the pitch in the opposite direction of Oscillator 2. In other words, make it sharp if you made Osc 2 flat.

The Mixer

Now that our oscillators are set, we gotta mix them in the next section! For bass we typically set the first oscillator to 10 (max) and then osc 2 and 3 are set between 5-8 to taste. Noise generator is set to off **(see Fig. 3)**.

There's a particular trick with the Model D for getting extra fat

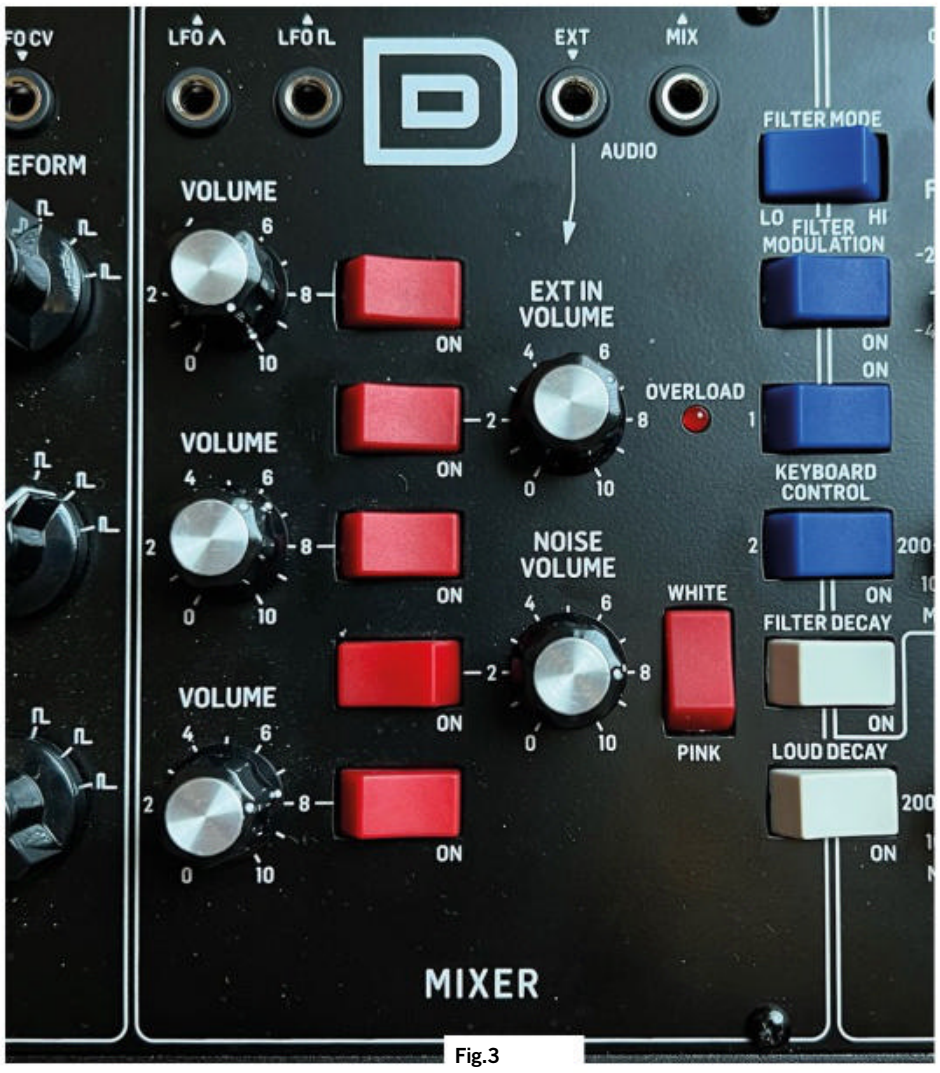


Fig.3

and thick sounds. It's the external input volume knob. If you route the output into the input and then crank it, you get an overdriven signal. Modern versions of this synth have the output of the Model D routed into the external input by default. A little goes a long way for this. If you want your bass to be extra fat and round, turning up the external volume input will add more of a 100Hz bump initially, until it starts distorting and feeding back.

If you want a clean, classy bass that fits into a crystal clear mix, then keep this knob to zero or take it out of the mixing signal for good measure. We've found that around 6-7 on the external input volume seems to be the sweet spot on the Behringer Model D for thick basses that haven't fallen apart yet from overdrive and feedback.

The filter

Dial in the filter and loudness contour to finish our bass patch; three switches connect the mixer to the filter section **(see Fig. 4)**, Filter Mod and Keyboard Control 1 and 2.

The first switch patches in modulation to the filter cutoff frequency. For this bass patch we'll keep it off (for now).

The keyboard control switches defines how much influence the keyboard notes have on the cutoff filter frequency. For added character, these switches help a lot! Keep them on for now.

The filter on the Model D is also just as iconic as the Minimoog name itself. It's only a Low Pass design, but has tons of character. In the filter section you'll see six knobs. The first is the cutoff frequency point. Next is the 'emphasis' which in modern terms is 'resonance'. And then you have 'Amount of Contour'. This number sets how much the filter envelope influences the cutoff frequency.

For our bass patch, we like to set the cutoff frequency around -3 to start. The emphasis is tricky because the more you increase it, the less bass will be in the signal. Its design naturally pulls bass out of the signal as it gets more aggressive. Let's keep it at zero for now. For the contour we like to set it to around 2 or 3 to start as well.

Both the filter contour and loudness contour have similar designs. You have attack time, decay time, and sustain. Now in modern terms, the decay is actually 'release' for a standard envelope. So think of it as an ASR envelope for both the filter and amplitude.

For this patch on the filter contour section, we keep the attack to around 5-10 milliseconds, short but just enough time for movement. Decay will be around 400-600msec. Sustain is set to zero.

In the loudness contour section, we set the attack to zero. For decay we typically start with 800msec to 1sec long so the bass notes have some "play" to them, and then get adjusted according to taste. If the track is fast, say 140bpm or higher, then shorter decays can help to create quick bass accents in the production. Sustain is usually set at 10 to start (max level) and then adjusted accordingly for the song. Quick note: make sure the decay switch is turned on.

At this point, you've got a simple, down and dirty bass patch that's usable across a lot of genres.

Wanna switch it up? Change the waveforms for different flavours. Adjust the filter cutoff while you play to create emphasis on certain notes. Dropping the filter cutoff to -5 will create an even rounder, more flatwound-style bass. And don't forget the external volume input to make your bass bark more or less.

Easy vibrato

Creating a simple vibrato for this patch is super easy. In the controllers section on the left-hand side, make sure the Oscillator Modulation switch is enabled **(see Fig. 5)**. Then set the modulation mix all the way to the right for Noise/LFO and set the switch to LFO as well.

Now as you increase the modulation wheel, you get a wobble in the pitch of the oscillators. Adjust the LFO rate to control the speed of the vibrato.

Fig.4

PRO TIP

Wanna have the filter cutoff do the same thing? Enable the switch titled Filter Modulation that's between the mixer and filter section. Now the filter moves with the LFO as you increase the modulation wheel, in addition to the oscillator modulation.

Detuning is your friend

When performing, grabbing Oscillator 2 for quick pitch detuning can create lots of sonic

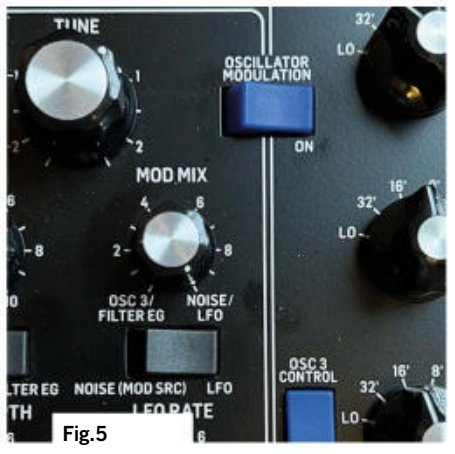


Fig.5

Fig.6

character. When a note is being held, this can be particularly useful. It creates drama and suspense hearing the notes detune briefly before coming back together.

Getting used to the oscillator tuning knobs can really enhance your expression on this synth.

Simple leads

Now that we have a down and dirty bass, we're just a few steps away from a lead. To start, turn off all the oscillators except for the main one. Set it to range 16' and keep it at a square waveform. Keep the mix volume set to 10. **(see Fig. 6)**

Open the filter all the way up. Keep the emphasis and contour at zero initially. For the loudness contour, increase attack to around 5-10msec. Set decay to 200msec and drop the sustain to 5.

As you play with the patch, drop the cutoff frequency to taste and experiment with the external volume input. You may want to introduce some emphasis in the filter and contour for movement.

To make this lead a bit more complex, bring in oscillator 2, set the range to 8' and the waveform to sawtooth. Mix this into the signal so it sits just under the main oscillator.

In the controller section, bring the glide up to 3 or 4. In the modulation mix, set it to 5 so it blends between the LFO and Osc 3/ Filter EG. Set to Osc 3 on the switch underneath the glide dial.

"THE MINIMOOG IS SUCH A SIMPLE SYNTH WITH AN INCREDIBLE SONIC PALETTE"

Next to Osc 3, in the oscillator bank, you'll see an Osc 3 control switch, switch it off. This makes it so Osc 3's pitch runs freely without influence from the keyboard notes. Now switch Osc 3 range to 16' and the waveform to a square wave. Keep the tuning around 0.

Now as you increase the modulation wheel and play with the tuning of Osc 3, you'll get some crazy frequency modulation effects in your lead, allowing for some interesting expression via the modulation wheel.

If the pitch modulation is too much, you can switch off the oscillator modulation and keep the filter modulation. This allows the modulation to be expressed in the filter cutoff alone. Increase the emphasis for more chirpy FX. And don't forget to adjust Osc 3 tuning from time to time to get even more expression out of the modulation! Add in some reverb, chorus, delay to taste, and you're good to go!

The Minimoog is such a simple synth with an incredible sonic palette. Learning how to program it is a valuable tool in sound design and music production. FM

Three great alternatives to an original Minimoog

Arturia Mini V

A classic staple of the V Collection, Arturia's Minimoog emulation captures the vibe, and adds some handy modern touches too.

Behringer Model D

Behringer's hardware take on the Model D sounds close to the real thing, and can be used in Eurorack form too, with added patchpoints.

NI Monark

NI's take on the Minimoog has lots of sonic heft – a great choice for powerful bass and authentically analogue-sounding leads.

HINAKO OMORI

Omori's new album, *a journey…*, was created at Real World Studios using binaural and 3D spatial tech. **Danny Turner** decodes its therapeutic frequencies

Born in Yokohama, Japan, Hinako Omori arrived on British soil aged just three years old. Possessing a seemingly innate interest in sound recording, she studied piano and later enrolled at the University of Surrey on a Music and Sound Recording course. This led to Omori working as a pianist, keyboard player and programmer for numerous high-profile artists including Kate Tempest, KT Tunstall, James Bay and Ellie Goulding.

Debuting with the sonically explorative EP *Auraelia* in 2019, Omori was invited to record sessions for WOMAD at Home's immersive audio series at Real World Studios the following year. Combining field recordings with binaural and 3D spatial technology, Omori's fascination with the therapeutic properties of sound and their ability to provide cognitive and physical well-being are captured on the resulting ambient electronic album, *a journey…*

What sparked your interest in becoming a sound engineer and studying music and sound recording?

"When I was a kid I had a tape player and always used to tape radio shows or things around the house and carry the recordings around with me. That sparked the idea of having a device that was able to record sounds there and then and revisit them like a diary. I learned piano too and would create a real basic computer microphone setup and try to find a good spot to get the best sound. Experimenting at that age stirred me to study at Surrey University, where I was lucky to have a very inspiring music technology teacher."

You also worked for Focusrite's Novation at one point?

"I was working in artist relations with the marketing team and helping artists to use their equipment. Part of that process also included connecting with the gear they were making, so it was inspiring to see things from that side of the fence and a nice world to be a part of."

You also worked as a session musician for a number of artists, both playing and programming. How did you get into that field of work?

"I fell into it by accident and was lucky to make connections through friends who were doing similar roles in music. I'm grateful to have had the opportunity to work with so many artists both in the studio and live. As musicians, we all help craft the sound that we're playing, so before we went into rehearsals I'd dive into the music and create sounds on the synthesiser that I thought would best complement the music in a live situation. It's fun to reimagine something that's already been recorded, see how I can take it to the stage and turn it into a different experience for the audience."

Did you always have plans to create music as a solo artist at some point in time?

"Honestly? Not really *[laughs]*. I didn't have the confidence to do my own thing until fairly recently and have only been recording my own music for the past four years because close friends gave me a gentle nudge to explore that route. I've always made little noodles on the side though, so I dove in and tried to make something out of those sketches and a few things that were completely different."

Your 2019 debut album *Auraelia* arose from a period of having sensory disturbances due to migraines. Did that give you the impetus to make music as a form of self-therapy?

"During that time, I was having migraines almost every day. I wasn't entirely sure what was going on, but the dots would appear and within ten minutes I knew that the white light would take over my vision. I wasn't terrified, it was an interesting experience to try to understand and discover how I could come out of it, but I was fascinated by trying to portray the visual element of that sonically. That inspired me to make these cloudy, hazy atmospheres using detuned oscillators that had a certain disconcerting element to them. Portraying those physical sensations was probably an uneasy listen for people, but that was the aim behind the EP."

"I'VE ALWAYS BEEN INTERESTED IN IMMERSIVE SOUND, SO TO HAVE THE OPPORTUNITY TO WORK IN A STUDIO LIKE REAL WORLD WAS HEAVEN TO ME"

How did you get involved with the WOMAD at Home project at Real World Studios?

"I went to university with a friend called Oli Jacobs who's the head engineer at Real World and he reached out and told me that, due to the pandemic, they were doing WOMAD online in 2020 and looking to connect with artists who would be interested in making an immersive audio experience. My immediate answer was 'absolutely', because I've always been interested in immersive and binaural sound, so to have the opportunity to work in a beautiful studio like Real World was heaven to me."

Can you tell us about some of the field recording and immersive audio techniques you undertook as part of that project?

"We were given a timeframe to present a piece of work, so I decided to finish off some demos I'd already been working on and piece together a 40-minute continuous ambient project. I also jumped at the chance to be in the beautiful nature surrounding Real World and took a binaural head out into the surrounding green areas to record some field recordings to add to the mixing session."

How did that process evolve?

"My idea was to incorporate this idea of forest bathing, or shinrin yoku, which is the Japanese term, to create a calming atmosphere by combining field recordings of nature with the songs I'd recorded. To make it more immersive, we re-amped some of the stems using Real World's Audio-Technica 8-speaker system, which was positioned in a circle in the Wood Room, and used a software plugin to direct where the audio would be coming out. Ultimately, the field recordings, synth sends and vocals were all re-amped binaurally."

In the back of your mind, was it always your intention to use those recordings for your latest album, *a journey…*?

"The new album is the entire ambient project that we finished at Real World. It was put online for the WOMAD festival for a week or so, but I was curious to release it as an album and Houndstooth were also kind enough to take it on board."

> "AS WITH ANY MUSIC, I'D LOVE THE LISTENER TO CONNECT WITH IT IN THEIR OWN WAY BUT HOPEFULLY THE MUSIC BRINGS A SENSE OF PEACE"

In what way do you see music as sound therapy in terms of the various brain states you've previously spoken of?

"As with any music, I'd love the listener to connect with it in their own way but hopefully the music brings a sense of peace and relaxation, especially with everything going on in the world right now. I've always had an interest in sound therapy and this album gave me a project to incorporate that into. There are frequencies that bring about certain brain states. For example, delta, which is between 0.5 and 4 Hz is said to contribute to deep, restorative sleep and healing; theta, which is 4-7 Hz, contributes to creativity, intuition and emotional processing; and alpha, at 8-12 Hz, relates to relaxed, passive attention. I wanted to make a continuous piece of music that took the listener into a meditation if you will, and chose specific frequencies for the different pieces with that in mind. I created synthesiser drones, some of which were detuned to create binaural beats that would entrain the brain into a certain state that will hopefully bring a sense of relaxation."

Is there an optimal way to hear the album?

"Listening to anything on surround sound is a journey in itself, so that's wonderful, but headphones is probably the best way, especially for the binaural beats where you're getting two tones at slightly different frequencies on the right and left side. As a disclaimer, I'd recommend not listening to the music while operating machinery *[laughs]*, a more relaxed environment would be better."

Are you interested in the latest Dolby Atmos technology, which is increasingly venturing from film to commercial music?

"Absolutely. I tried using Dolby Atmos for an all-female electronic artist compilation on the Sisters of Sound label. We spoke with Dolby and were kindly offered the opportunity to use their plugin to mix and pan elements of stems of our tracks in an immersive way for the Dolby Atmos system. I found it really fun having this visual representation of what you're hearing and physically moving the elements around. I'd love to do more of that given the opportunity and I know that my mastering engineer friends are mastering in Dolby Atmos, so it's definitely the way forward. Going back to the archives and remastering music in Dolby Atmos to hear them in a completely new way is also really exciting for me."

Though the aim of your music is for the listener to create their own narrative, we understand the album track *The Richest Garden In Your Memory* has a more specific meaning?

"This track in particular does mean a lot to me. It's a poem by a wonderful friend of mine called Emily Grosholz who I sat next to by chance on a flight after it was diverted from New York to Philadelphia. Emily's a philosopher and university lecturer, so we struck up a conversation, became pen pals and I was blown away by the poetry she sent me. I asked her if she'd mind me putting some of her words to music, and that process seemed to come very naturally to me. Again, it's all about perception and interpretation – when others read her beautiful words it will perhaps connect to them in a completely different way."

You're working from Ten87 Studios in Tottenham – is that a hired space?

"Yes, and I've found it really beneficial to find a creative space that's separate from my bedroom studio. The room is soundproofed so I just moved all my equipment in there and it's lovely to know that some of my friends have had studio spaces there in the past too."

There are some lovely warm drones and synth tones on the album. What are your go-to hardware synths to obtain these sounds?

"On this record it's mainly the Sequential Prophet '08, OB6 and Moog Matriarch, which are my go-to synths for making music and playing live. A lot of the music comes from getting to know a new piece of equipment, so when I meet a new synthesiser I usually spend time playing around with the parameters just to see what comes out and typically end up using those noodles on my music. The Matriarch was also the first time I'd tried using a semi-modular synth and that was a great learning curve in itself. Because of that I'm really inspired to start using gear that doesn't have keys because I

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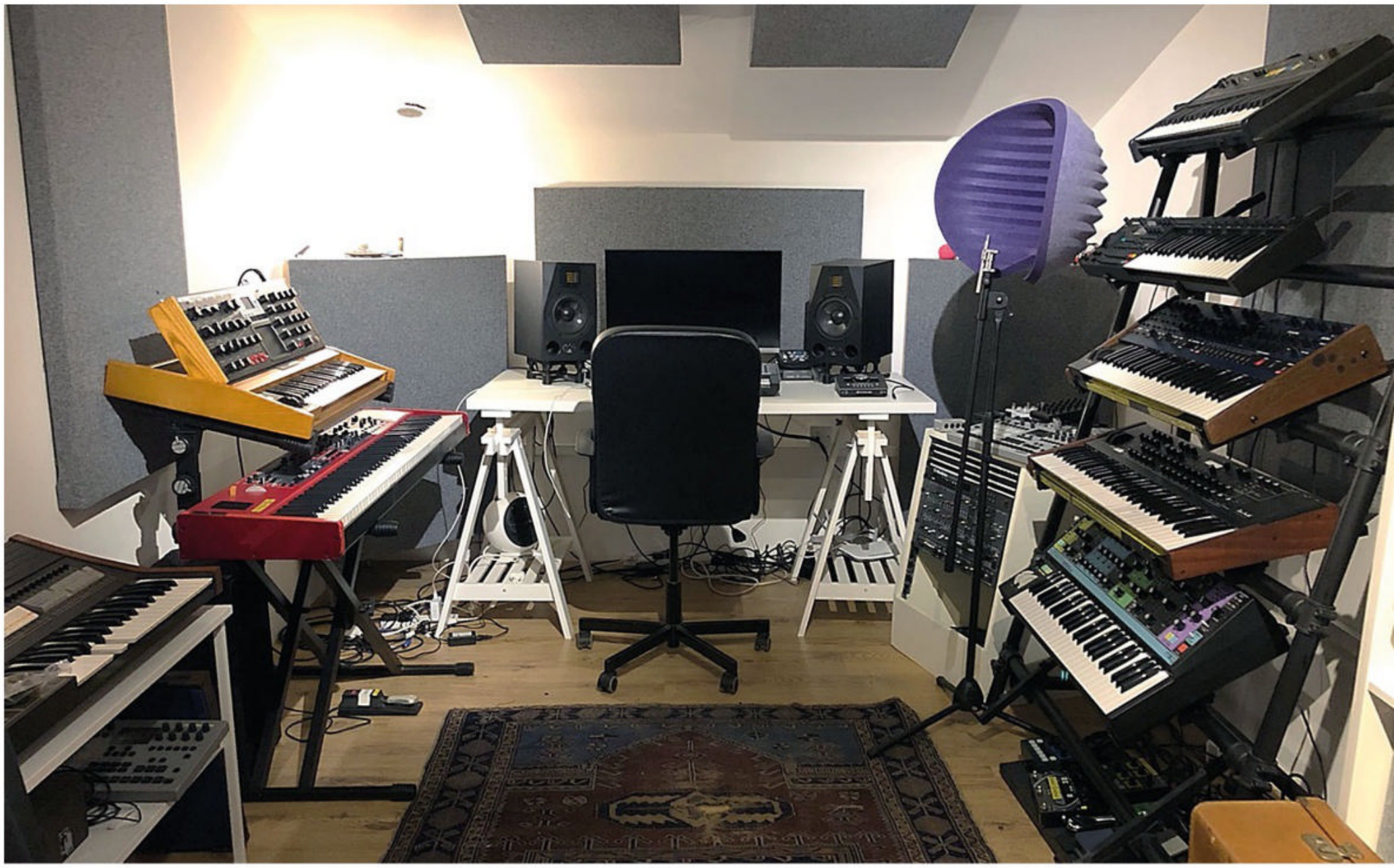
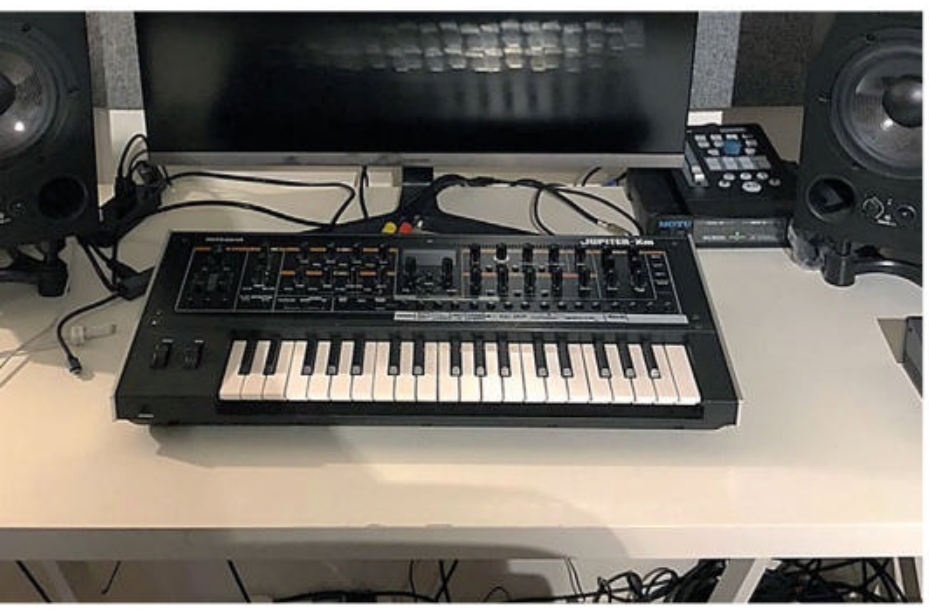




always end up thinking more about chords and notes rather than the happy accidents that can come from patching."

So we can expect you to be diving into Eurorack in the near future?

"I've already done a part swap and got two bits of modular equipment, and I know it's going to be a slippery slope, but it's one I'm willing to slide down. Although soft synths and plugins are very useful, I do generally prefer to stick to hardware synthesisers and connect with equipment that I can touch for the tangible immediacy of hearing what I'm doing with my hands. When I'm on the road, soft synths are really useful and there's an art to creating sounds in that way, so I'll use plugins when I'm mixing or adding effects to stuff I've recorded from synths into my audio interface."

Your vocals are quite effects-heavy and melt nicely into the music. What are you using on those?

"I've always been quite shy of my dry vocals and prefer them to sound more like an instrument or texture than a lead, so I'll tend to hide them behind effects. I love using Soundtoys plugins to create a certain atmosphere on vocals, but my go-to is the EarthQuaker Devices Avalanche Run pedal."

"I HAVE A SILVER RUSSIAN SPACE DISTORTION PEDAL, BUT IT DOESN'T HAVE A NAME ON IT. I BOUGHT IT AT AN OFF-LICENCE IN BERLIN"

You seem to have quite a few effects pedals for synths and vocals…

"I have a silver Russian space distortion pedal, but it doesn't have a name on it. I bought it at an off-license in Berlin that was selling pedals in the window – you plug in the instrument and it blinks red and creates this mad, crunchy distortion. My favourite pedals are the OTO BIM and BAM and I'm quite obsessed by the Pigtronix Infinity Looper, which is a pretty in-depth stereo looper pedal that allows you to do loops in series and reverse loops, but there's also verispeeding so you can plug in an expression pedal to control the speed of your loops on the fly, which is really fun. It's great for drone improvisations and playing live."

You also have a couple of unique-looking synths, notably the Korg Sigma KP30 and the Akebono Koto Synth, which has its own little suitcase?

"The Korg Sigma was passed on to me by a dear producer friend called Kwes who's signed to Warp Records. He messaged me one day and asked if I wanted to take on his Sigma and now I'm looking after it in my studio. It's a really fun machine that has a lovely quirky characteristic to it – it's all about experimenting and being inspired by its sounds. I found the Koto Synth on eBay and believe it was built in the 1980s. It's more like a sampler because it has note by note recordings of a Japanese string instrument called a Koto, which has a beautiful sound, and you can change the tuning to different scales as you would with the real instrument. My great aunt is actually a Koto teacher and my understanding is that the synth was built for people who were learning the Koto but might not have one available at home. The suitcase is actually an amp so you can connect it to the synth and hear it in your room without headphones."

What was it that you used to make those wonderfully glassy sounds that we can hear on the track *Heartplant*?

"The source is the Moog Matriarch and it was basically just the result of me trying to figure out how it works. As I say, a lot of my audio noodles are from trying to learn a particular new piece of equipment. I hadn't used a semi-modular synth before, so that was me trying to figure out how it works then putting it through the OTO Machines BAM reverb pedal."

You have a show coming up in March at Southbank accompanied by the London Contemporary Orchestra?

"It's the first time I'm playing *a journey…* in this context. I've played it solo before but I feel lucky to have the opportunity to collaborate with the LCO and orchestrate the album in a way that will incorporate more organic instruments, so this will be a new version of the album." FM

WANT TO KNOW MORE?

Hinako Omori's new album *a journey…* is out March 18th on Houndstooth. For more, visit **hth.lnk.to/Hinako**

Lisa Lashes and other DJs exemplified the genre's fun, inclusive spirit

Hard house

It's house and it's hard. This pleasingly straightforward subgenre has never taken itself too seriously

Hard house as a genre emerged in the mid 1990s, primarily from London gay clubs initially, before spreading further afield. But, to tread into uncharacteristically philosophical territory, what exactly distinguishes hard house the genre from other house music which happens to be hard? The best way to explain is probably to look back at what came before the term was coined.

The early '90s was one of the most exciting eras in history for electronic music, with new scenes popping up left, right and centre. Unsurprisingly, producers were already making harder versions of house sounds before the term developed in London. Some of the ghetto house released on labels like Dance Mania could certainly be considered a harder take on house music, such as Traxmen & Eric Martin's decidedly un-PC *Hit It From The Back* (1994). In a similar era, hardcore was kicking off in Europe, as we've previously explored on these pages. A track like LA Style's proto-hardcore banger *James Brown Is Dead* (1991) could easily be classed as 'hard house' in a sense, but not quite what's usually meant by the term. Still, the seeds of the sound are visible from the early '90s.

Our story now leads us to London club night Trade, held at Turnmills, the first venue in the UK to secure a 24-hour licence. Launched in October 1990 by musician and promoter Laurence Malice, Trade's music policy started to change when DJ Tony De Vit started a residency at the night in 1993, having first visited the club within months of opening and been impressed by the disco-tinged house sounds he heard. By 1993, Trade's sound leaned heavily towards what was disparagingly called handbag house, diva-led house tracks which blended house, disco and R&B influences (think Black Box's *Ride On Time* or CeCe Peniston's *Finally*). De Vit steered the music in an increasingly tough direction, a sound which quickly became known as hardbag (as in a harder take on handbag), then morphed into hard house.

Generally focussed around the 140-150bpm range, the classic hard house sound is relatively simple. None of its key elements are unique to the genre, but hard house is distinct from hardcore, techno and trance in subtle ways. There are obvious production tropes such as big 4/4 kick drums, hoover sounds, offbeat basslines, stabs, drum rolls, breakdowns and vocal samples, but above all else the magic is in the interplay of toughness and tempo with playful energy and a delicate swing to keep the rhythm interesting.

As with so many genres, a quest for heavier, faster sounds spelled the inevitable decline of hard house. From a commercial peak around 1998 to 2002, hard house receded to more of an underground position as other sounds emerged in the mid-2000s. Nonetheless, its influence lives on in scenes like donk or Scouse/bouncy house.

One thing that remains hard to explain is why hard house seems to have languished behind some other '90s subgenres in terms of a full revival in recent years. We've seen rave and hardcore creep their way back into vogue, full-on jungle revivals and even a nostalgic re-evaluation of much-maligned trance tropes. Hard house hasn't, but maybe that's why it's remained a quiet influence on lots of house and techno producers. Among countless examples, Bristol big room house don Eats Everything cites Tony De Vit as his personal hero and paid tribute with last year's *Return To Hardbag* EP, while London-born techno experimentalist Call Super recently released an early 2000s hard house mix from his archives.

Never particularly concerned with being trendy, hard house is a pleasingly straightforward genre.

© PYMCA/Universal Images Group via Getty Images

Hard house legends: DJs, producers and labels

Tony De Vit – *Are You All Ready?* (1996, Jump Wax Records)

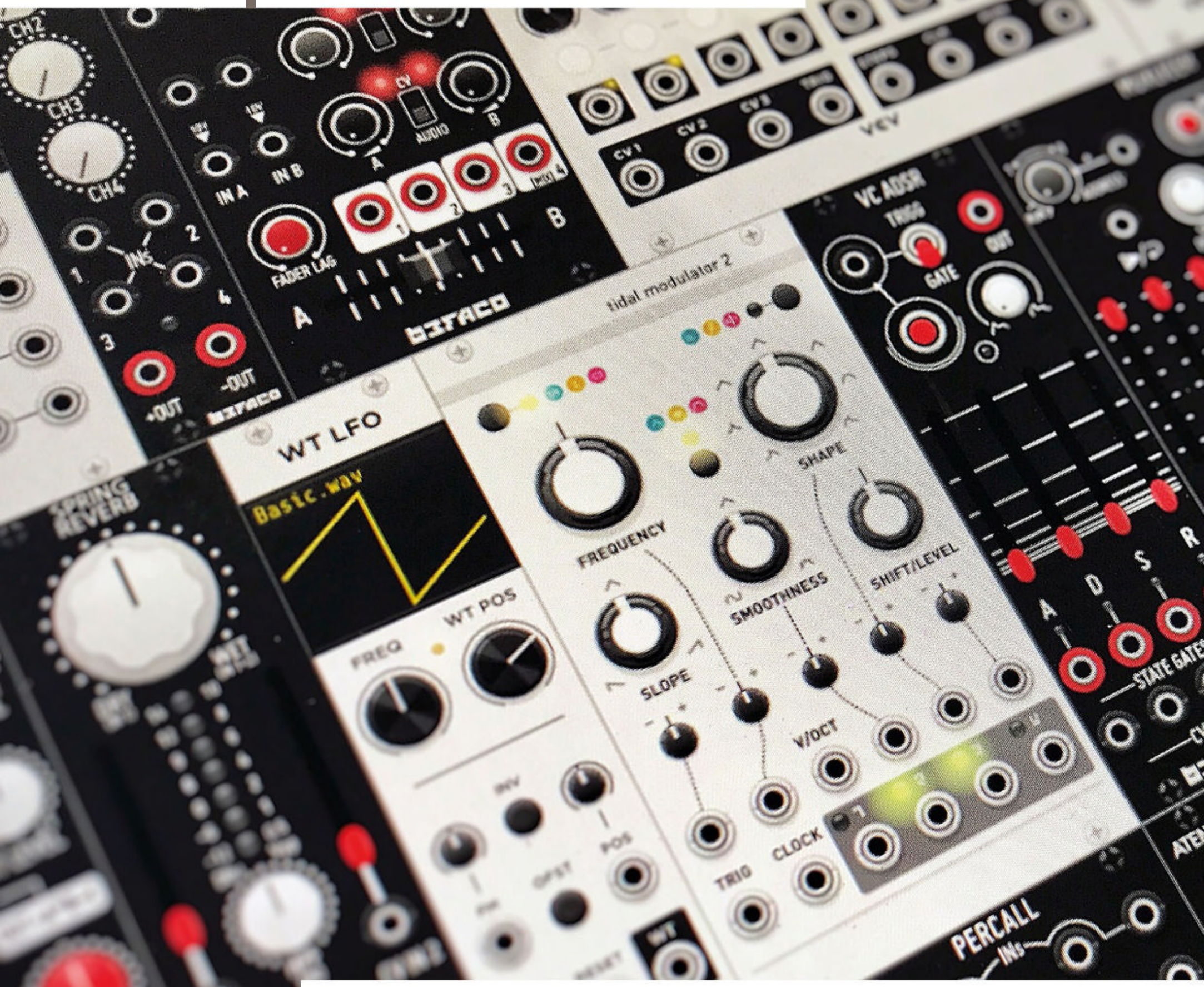
The undisputed godfather of hard house, De Vit was an accomplished producer as well as a world-class DJ. The hardbag crossover hit *Burning Up* and breathless, trancey *To The Limit* showcase slightly more subtle sides of a genre not known for subtlety, but *Are You All Ready?* is pure balls-to-the-wall silliness, a late-night hoover-bassline stormer which catalysed hard house moving even faster and even harder. De Vit tragically passed away from HIV-related illness in 1998, aged just 40.

Tidy Girls – *Tidy Girls* EP (1999, Tidy Trax)

Hard house was an inclusive scene compared to other dance subgenres. From its roots in London gay clubs, the sound spread to mixed crowds around the UK, while the gender balance was also more equal than elsewhere. On 1999's *Tidy Girls* EP, four of the leading ladies of hard house – Rachel Auburn, Lisa Lashes, Anne Savage and Lisa Pin-Up – collaborated with Tidy Boys' Amadeus Mozart and Andy Pickles for a stone cold classic.

Fergie & BK – *Hoovers & Horns* (2000, Nukleuz)

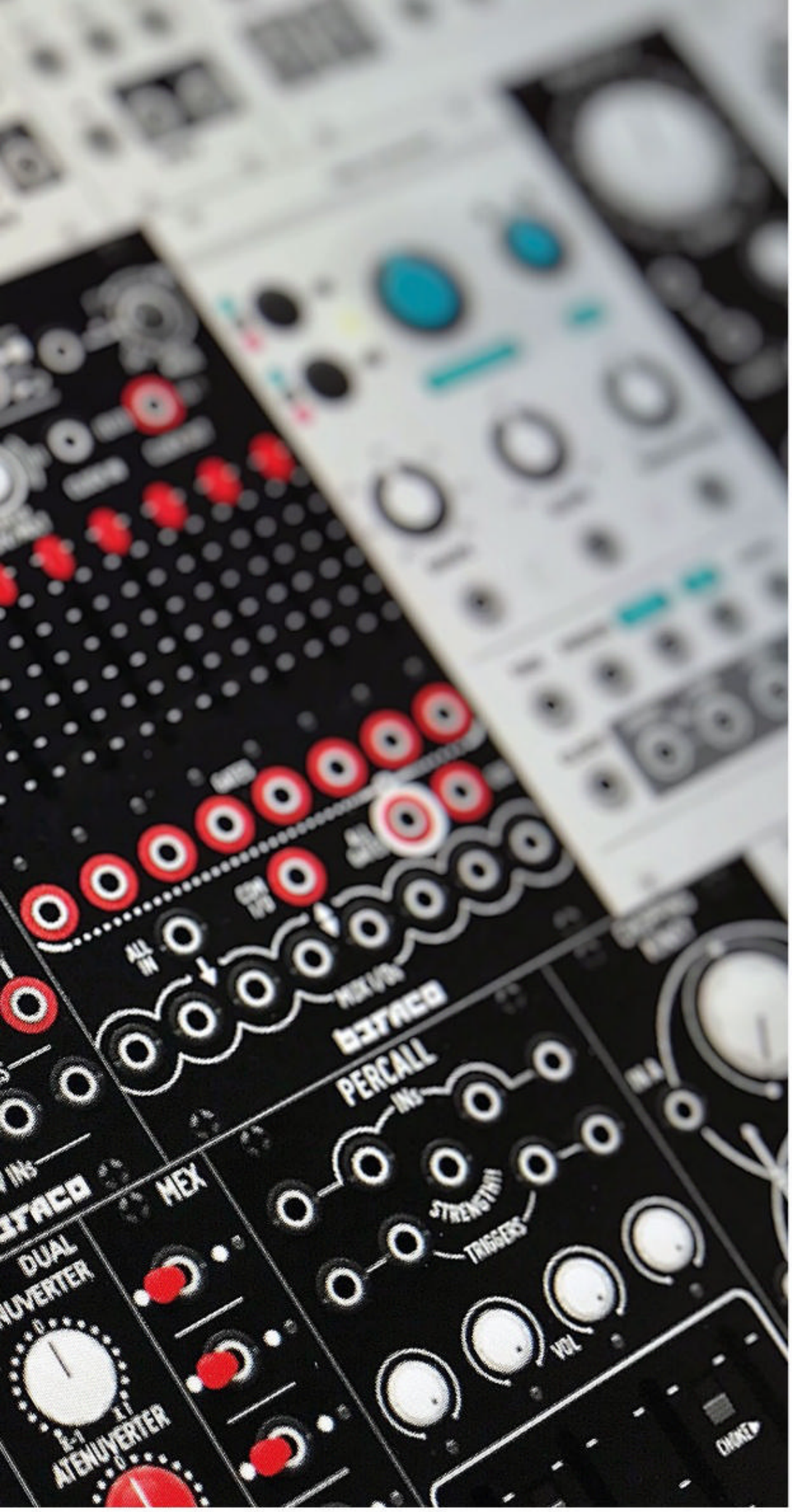
Released on the influential Nukleuz label at the peak of hard house's golden era, *Hoovers & Horns* shows a maturity in arrangement and production which was missing from some of the less polished music of the genre. Taken on as a protegé by De Vit following a meeting in his native Northern Ireland at the tender age of 15, Fergie was still only 20 when the track was released, but already a superstar of the hard house scene. FM



VCV Rack 2 Pro $149

After a few year of development, VCV Rack 2 is here. **Bruce Aisher** grabs some (virtual) cables and gets plugging

CONTACT **WHO:** VCV **WEB:** vcvrack.com **KEY FEATURES** **I/O:** Dark room mode. Module selections to save, share, edit and move selections of modules. Enhanced module browser. Redesigned UI and built-in modules. Port tooltips, context menu and key commands. Optimised real-time engine with multiple audio interface support (if supported by manufacturer). Add/remove individual modules from the VCV Library



THE PROS & CONS

+

Updated module browser makes for quicker and easier module management

Access to a massive library of third-party (and mostly free) modules

Ability to run VCV Rack Pro as a plugin within a DAW greatly expands its use

–

The online manual is not complete (which diminishes the ability to use some modules to their fullest extent)

Some module functions (such as VCA linear vs exponential mode) are only accessible via the right-click module menu

Even those with only a passing interest in the world of music technology can't have failed to notice that the rise of the DAW and digital music making hasn't killed-off the love of hardware. In fact it could be argued that the dominance of computers in music making has only increased the urge of some to connect with the non-virtual world – and this is especially the case when it comes to synths. The massive growth in the availability of Eurorack modules has tied into this narrative, alongside the yearning for some musicians to travel down less predictable sonic pathways. However, building a modular system is not for the hard-up or faint-hearted, and while some claim that the use of patch cables and difficulty in recalling a favourite configuration are a positive creative force, there is no denying that software brings big benefits.

We conveniently therefore arrive at VCV Rack 2. This started life in 2017 as an open-source, cross-platform project, with a first 'proper' version arriving in 2019, followed by this latest major update two years later. Version 2 adds some new functionality, but there have also been a lot of tweaks under the hood. As before, Rack 2 comes in two flavours. Rack 2 Free is fully-featured in terms of synthesis, but can only be used in standalone mode, and with just forum-based community support. Rack 2 Pro adds the ability to run VCV as a VST plugin within your DAW, and with more formalised professional product support. Both options are available for Mac, Windows and Linux, and a wider range of plugin formats for Pro are promised soon – ProTools and Logic users in particular will have to wait a little longer.

Rack 2 comes with more than 30 built-in modules, but there are currently more than 1800 free third-party (and 300 premium) modules accessible in the VCV library. The library also includes official clones of real-world hardware from established Eurorack manufacturers, many free.

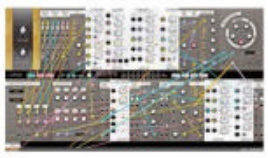
On first launching VCV Rack, you are presented with a template patch that provides a nice overview of the signal connectivity required to create a MIDI-controlled, multi-oscillator monosynth. Two critical modules here are VCV Audio and VCV MIDI to CV. Like any DAW they both need configuring for your specific hardware, but this is straightforward. For more complex routing needs, the Core Library includes eight and 16 output versions of the audio module (and dedicated MIDI CC to CV and MIDI to Gate modules plus a range of their inverted counterparts for turning internally generated CV into MIDI data). MIDI notes can be generated by your computer keyboard or even a gamepad.

Of course, all this talk of CV (Control Voltage) Gates and Triggers in fact refers to their virtual equivalent in the VCV modular universe rather than actual analogue signals, but their (virtual) ranges here fall within familiar conventions such as 1V/Octave and 0-10 volts, with patch cables (in five colour options) used to do the routing.

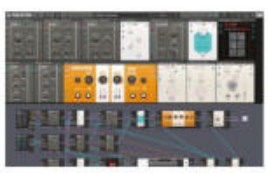
As anyone who has been brought up in the world of polyphonic virtual instrument plugins and who has subsequently stepped into modular patching will know, sometimes even the simplest sounds need a whole host of modules. However, beneath this apparent complexity lies a cool logic – that there are no shortcuts. As such, modular systems are a great way of understanding how synths work. At the heart of VCV are its Fundamental modules that take care of essential sound generation, routing, modulation and manipulation functions. There are two VCOs (Voltage Control Oscillator) modules, with the first offering four simple analogue-style wave-shapes alongside various modulation and

THE ALTERNATIVES

Cherry Audio Voltage Modular 2.0 from Free
Voltage Modular Nucleus come with just over 20 modules to get you started. This can be expanded with other modules in various bundle sizes (all developed in-house).
cherryaudio.com



Softube Modular £89
Impressive software with 50+ included modules including modelled Doepfer. Add-ons include officially licensed modules from Buchla, Intellijel, Mutable Instruments and others.
softube.com



NI Reaktor £179
While not really intended as a recreation of conventional hardware modular, Reaktor is, however, a well-established and very powerful software system.
native-instruments.com

control options for FM (Frequency Modulation), oscillator Sync and PWM (Pulse Width Modulation). The second of these generates audio based on wavetable playback, and also adds the ability to modulate the wavetable position.

It's worth pointing out that there is some context-sensitive help for the module parameters through VCV Rack, and more detailed referencing of the online manual can be accessed by bringing up the right-click menu in each module (where you will also find extended parameters and management features such as Randomize, Duplicate and Initialize). That being said, the manual entry for the Wavetable VCO merely says 'Coming Soon', so some of the detail relating to this module remains hard to access (and this is far from the only module where this is the case). Further sound generation come in the form of Noise, with variously 'coloured' noises available. Remember also that noise generators can be used for non-audio purposes such as in sample-and-hold.

Tonal shaping is handled by the VCF (filter) module, which is of a resonant 24dB/octave type, and with separate outputs for high and low pass variants. It's simple and effective, with decent character.

Someone somewhere once said that you can't have too many VCAs. The beauty of a software system is that you can have as many VCA (amplifier) modules as you want. The current version of the VCV VCA is somewhat slimmer in appearance in order to save screen real-estate. However, this does mean that while it does offer useful feedback on the input CV level, the ability to switch between Linear and Exponential responses is hidden in the 'back

> The beauty of software is that you can have as many VCA modules as you want

VCV PRO PREMIUM EXTRAS

VCV also develop their own premium modules for expanding VCV Rack, and two of them can currently be purchase in a discounted bundle with Rack 2 Pro – VCV Drums and VCV Sound Stage.

VCV Drums features nine standalone analogue modelling drum modules based around similar sonic generation and shaping techniques employed in some classic machines (albeit in the digital realm). The dominant machine reference here is the Roland TR-909, though the 808 gets a look-in as an alternative kick drum model. Overall, results are great, and the modular features allow you to easily create a host of parameter modulation connections with CV generators. When using VCV Pro in plugin mode its MIDI-Gate module can be used to trigger sounds from a DAW's MIDI track. Classic integrated multi-lane X0X-style step sequencing is perhaps best served by a VCV's Pulse 16 ($30) or other third-party module.

I was also impressed by the reverb processor Sound Stage and its ability to adjust the virtual room parameters while independently positioning four different input sources and 'mic' destinations. As well as being able to create very accurate sound spaces, it offers plenty of scope for experimentation.

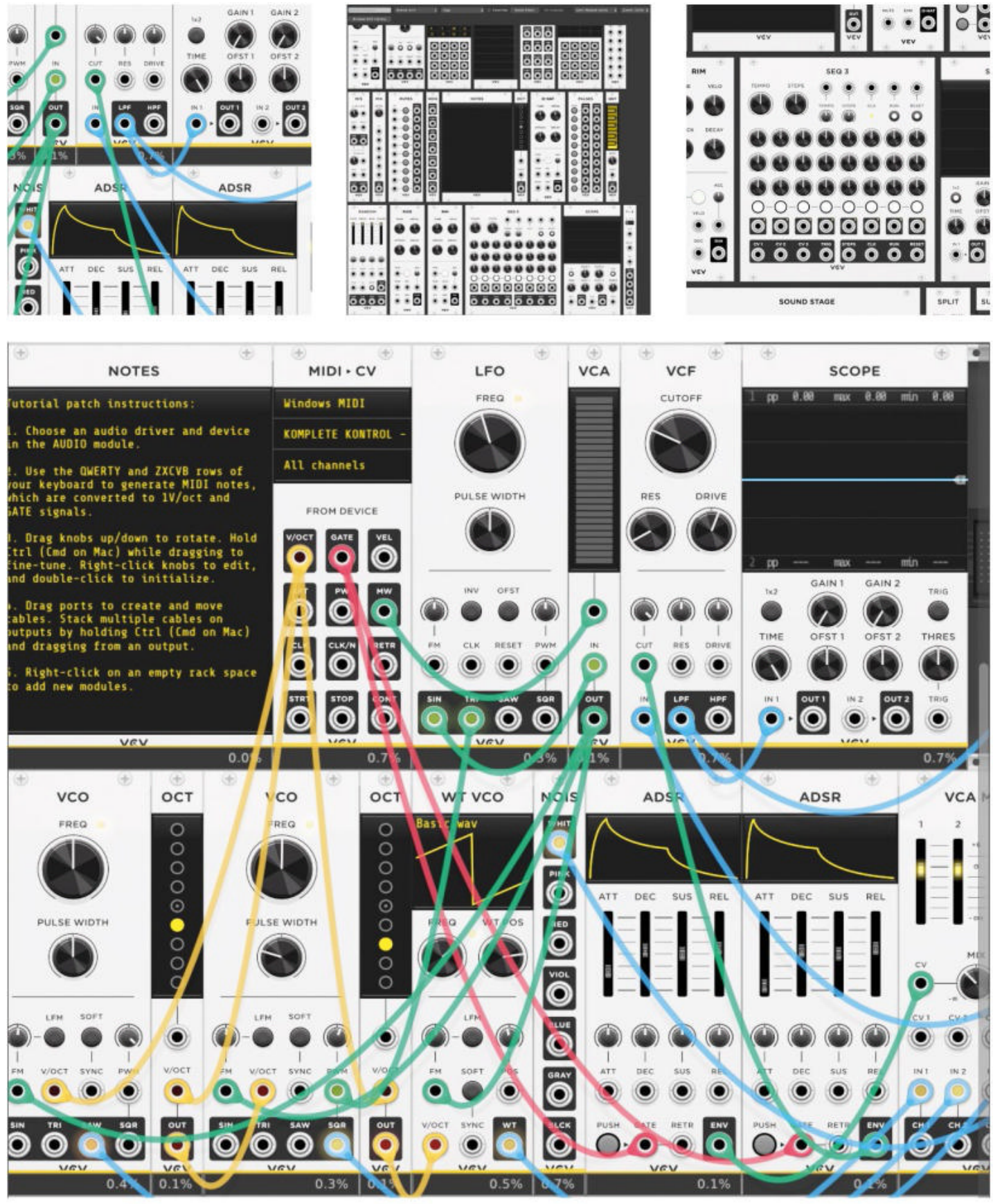
panel' settings, with no front panel indication of what mode it's currently in. A small but noticeable point.

LFO and Envelope functions come in the form of the LFO, Wavetable LFO and ADSR modules. All of these have functions that extend beyond the basic, such as adjustable voltage control over all four ADSR level/timings. Mention should also be made of the Random module that creates random CV, and has a triggerable sample-and-hold function as well as various types of output interpolation (for smoother transitions between values).

All of this would be of limited use without the ability to mix, level and trigger the various elements. To this end the Mix, Unity and VCA Mix take care of signal combination, and with varying feature sets (including CV control). Remember that in the world of modular, audio and CV signals can usually be processed by the same modules. Further routing control is provided by 8vert (attenuator/inverter), Mutes, Octave, Quantizer and the two Sequential Switch modules, while sequencing is addressed by VCV Pulses (which contains 10 rows of manual trigger and gate generators) and Seq 3 (eight steps, with one trigger and three CV lanes). For linear drum sequence programming you'll need to use multiple module or find one to add from the broader library with a more expanded feature set.

The final pieces of the pie are audio processors for adding (monophonic) delay and converting between L/R stereo and Mid/Side formats (that can adjust the stereo image or more complex recording, playback and processing tasks).

Something VCV Rack can do, that requires considerable additional expense and effort in the hardware realm, is polyphony. In this mode, the software can accommodate up to 16 channels of audio or other signalling down a single cable. Once configured in a CV/Gate generating module (such as MIDI-CV) – and assuming all loaded modules support this feature – polyphonic playing of sound patches is possible. Polyphonic signals are indicated by thicker patch cables. Specialist modules such as Split, Merge, Sum and Viz, let you visualise and manage aspects of polyphony and how it interacts with monophonic sources (and vice versa).



MODULE BROWSER: The enhanced module browser now includes zoom, favourites and sorting functionality

SELECTA: Module selection and related functions – save, share, edit and move groups of modules

NEW FACES: Redesigned UI and built-in modules refreshed for version 2

VCV LIBRARY: The software links to a huge library of downloadable modules available online

The sheer range of modules available will often have you hankering for more rack space, if only to access more filter types, more interesting oscillators or expand sequencing capabilities. So, while the included modules in VCV Rack make for a useful core setup, you'll inevitably look to expand. Luckily, a dip into the VCV Library will immediately satisfy. Here, thousands of other modules can be introduced to your rig. Clicking 'Add' in the web window while logged in to your VCV account will automatically add them to the update list for inclusion in the software's browser.

VCV Rack 2 makes many worthwhile additions and feels smoother in use, while the management features make for a speedier workflow. While direct product support is welcome, it's the ability to run VCV within your DAW which is the real draw in moving to the Pro version, and for some this is a deal-breaker. That and the fact that such financial support will help the ongoing development of this very capable product. FM

FM VERDICT

8.9

Although a lot of what is new in this version is under the hood, there are enough new features to make this a solid update

Boss RC-505 MkII Loop Station £554

The Boss of tabletop loopers receives an upgrade after eight years at the top. **Robbie Stamp** explores the latest station

CONTACT **WHO:** Boss (Roland Corp) **WEB:** boss.info **KEY FEATURES** **I/O: AUDIO INPUTS:** 2x XLR (Mic), 4x 1/4" jacks (line/inst) **AUDIO OUTPUTS:** 6x 1/4" TS (Main and Sub 1 & 2), 1x 1/4" TRS (Phones) **Other I/O:** 2x 5-pin DIN for MIDI, USB-B socket, 2x 1/4" TRS jack for expression/control footswitches **MAX RECORDING TIME:** approx 13 hours total **MEMORY SLOTS:** 99 **DIMENSIONS:** 420x 234x 67mm **WEIGHT:** 1.8kg

THE PROS & CONS

+

Expanded (customisable) control set for each loop track

Enormous data storage along with 32/44.1 sample resolution

A comprehensive effect list with plenty of hands-on control

–

The full range of functions and parameters can take time to absorb

The RC-505 MkII is an expanded and enhanced update of the original desktop Loop Station, one of Boss's many great original designs that has held its own as (digital) audio electronics has charged onwards. Though much of the layout remains familiar, the five loop tracks have grown in length to accommodate longer throw faders and an extra button, splitting the old Edit into separate FX and Track (select) buttons, the first of a number of performance-related tweaks that help push the creative efficiency of the RC-505 MkII.

There is a lot more light coming off the RC-505 MkII thanks to expanded control set for loop tracks/effects and the larger LCD display. The housing and buttons are durable and robust, which are essential for live performance use. The controls are responsive and intelligently spaced for multitrack manipulations, while the non-performance-related buttons, such as system menus and memory management, are small and discrete to prevent unintended adjustment. The visual feedback for the loop tracks is excellent during playback/recording and the expanded LCD display can be set to mirror the loop rotations or show input/output levels simultaneously. Of course the display is central to the deeper editing capabilities of the RC-505 MkII along with the four rotary encoders and page navigation buttons that surround it.

Getting to know you

Before exploring the extensive behind-the-scenes parameters, every user ought to, and will find it hard not to, play with the five loop tracks' primary features. Recording a loop, overdubbing it, adjusting its level and applying effects is immediately satisfying, and layering up the five tracks is even more so. Pressing the Track button pulls up the five pages of parameters that control the finer details of playback and recording: reversing, speed, loop length, fades, input selection and more. Having delved in here, it's easier to understand the architecture of the RC-505 MkII, from effects and rhythm accompaniment to memory management. Though the design is intuitive, there is often a need to cross-reference with the manual as some terminology may need fleshing out and some useful functions may be missed.

It's a short hop from the five loop tracks to some vital controls: undo/redo, tap tempo, rhythm start/stop and all start/stop. The first of these is not only essential during the recording/overdubbing process but it also provides a temporary layering function during performances. Tap tempo acts as you'd expect, but also while the tempo is displayed on the screen you have an opportunity to grab a rotary encoder and shift up/down, with the loops stretching and compressing accordingly. At the extremes the digital processing this involves becomes starkly audible, which may or may not be your bag, but shifts of around ±20bpm are handled with minimal degradation, depending on the source. Getting into the nitty gritty of the looping options only serves to expand the creative possibilities, further dispelling the lack of seriousness one may infer from the rather playful appearance of the RC-505 MkII.

The RC-505 MkII now houses

THE ALTERNATIVES

Electro-Harmonix 95000

$595

The six-track Performance Loop Laboratory hosts a not-dissimilar feature set to the RC-505 MkII with footswitches that give it some floor-based potential. Less visual feedback and no effect section(s) makes this a more raw looper, though there's plenty of flexibility via the USB, MIDI and SD card slot.

ehx.com

HeadRush Looperboard

£721

A deluxe looper which can't decide whether to live on the floor or the desktop – it has footswitches and a 7" hi-res multi-touch display. Four tracks, MIDI/USB connectivity, built-in drum/percussion loops and effects put it in the RC505 MkII ballpark.

headrushfx.com

four backlit FX buttons beneath each of the large knobs that bookend its upper section. This may only be one extra effect per section but the Edit button above turns the A-D buttons into bank selectors so that 16 different effect types can be assigned per program to each of the two effect blocks. The effects can be globally applied to whichever track has its FX button lit, or individually assigned to one of the tracks/inputs. The number of effects has also expanded with 49 available on the Input side and 53 on the Track side. As you can imagine, this is an all but exhaustive collection that runs the gamut from simple distortions and filters to a pattern slicer and pitch/harmony effects. Each has anything from two to ten pages of parameters, though the ten pager is for handling the 16 steps of the step slicer. It may seem overwhelming but they are easy to tweak to taste, and in use a well set-up pair of FX blocks become integral to the process, particularly when the main knobs are called on for filter sweeps, pitch shifts, etc.

TRACKS: Eminently playable backlit controls loop record/overdub/ playback, track editing and effect toggling, plus a fader for track level

INPUT FX: Four effects in four banks assignable to any/all inputs. 49 effects types are available, each with a parameter assigned to the FX knob

TRACK FX: Four effects blocks in four banks, 53 effect types. The backlit buttons A-D toggle effects on/off and select slots/banks for editing via the LCD display

DISPLAY: Four rotary encoders to tweak parameters and navigate sub-menus. Buttons either side access major programming areas

Buried treasure

Beneath all of this, hidden away in the black housing, a huge expansion has occurred. Though there are still 99 memory slots they now get to share a total of around 13 hours of recording time at 32-bit 44.1kHz resolution; the original had three hours at 16-bit 44.1kHz. The data processing resolution is matched by the AD/DA conversion, and though human hearing can't match the dynamic range this allows, it does mean that quiet signals can be boosted without the digital noise floor or dithering becoming an issue. The onboard rhythm section is also generous, whether used for initial recording or actual performance, and there's plenty of room for expansion via the USB connection (see 'USB Mass Storage and Interface').

Additional control of the RC-505 MkII comes in the form of two expression/footswitch sockets and old school 5-pin DIN socket MIDI. The former can be assigned to a range of tasks such as memory slot navigation, tap tempo, rhythm start/ stop, effects control, input mutes and various individual track functions. Via MIDI, the RC-505 MkII can transmit and receive clock/tempo, program changes and control changes, the latter part of a comprehensive 16 slot control assignment sub-menu.

The RC-505 MkII may exude a jolly Christmas tree vibe but it is a formidable powerhouse of looping and layering with enough functionality and flexibility to grow with dedicated users. It can be used for a large range of performance, composition and experimentation tasks and benefits from an easy to use control set that draws users in. This is a professional tool that can inspire creativity as easily as it can capture it. There is a lot on offer for the kind of sensible price one expects from Boss. FM

USB MASS STORAGE AND INTERFACE

The RC-505 MkII USB socket has two utilities: data import/export and audio/MIDI interfacing. Considering the ~13 hours of recording time, running out of space may not be an issue for a while, but archiving, organising memory slot orders for performance and shipping in loops from other sources may well be. Also, it is possible to process loops on your computer to drop back into the looper, or move loops to different tracks.

As an interface the RC-505 MkII can work with your DAW and other apps with MIDI control on the side. The Loop Station can route the incoming USB audio to its line-out or sub mix, or use it as a loop input, which is where the real fun lies.

FM VERDICT

8.2

Boss have extended and enhanced their flagship desktop loop station without compromising its original quality and playability

Advertisement

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If you're looking for an easy way to save money on your household bills, what better way than to compare prices and policies with GoCompare.

From car insurance and home insurance, to travel insurance and broadband, you can compare quotes for over 40 products. Now that's something to sing and dance about.

GoCompare

Future Music UK and GoCompare.com are both Future Plc brands

Beyerdynamic DT 700 Pro X £219

They may be pitched as cans for content creators but, as **Simon Fellows** discovers, that these headphones are far more capable than that

CONTACT **WHO:** Beyerdynamic **WEB:** europe.beyerdynamic.com **KEY FEATURES** Wired, closed-back circumaural headphones. **NOMINAL IMPEDANCE:** 48 ohms. **FREQUENCY RESPONSE:** 5 – 40,000 Hz. **NOMINAL SOUND PRESSURE LEVEL:** 100 dB SPL (1mW/500Hz). **WEIGHT:** 350g

Plenty of brands – Shure, Røde, Roland to name just a few – have been quick to create product lines that feature less expensive, more user–friendly versions of their pro gear for use by pros and newbies alike in the new "content creator" age.

Now, it's Beyerdynamic's turn to buck the trend with its brand new Pro X range. Currently, it comprises two mics and a couple of headphones, the open-back DT Pro 900 X and the ones we're looking at here, the closed-back DT Pro 700 X.

I'll be honest, this set of cans has made me re-evaluate my prejudices against this area of the market. Darn, these things are good.

Beyerdynamic already has a Pro range that includes products like the iconic DT 1770 Pro, which is about twice as expensive as the DT Pro 700 X, and the very popular DT 770 Pro, which is about half as cheap.

In the hand, these headphones look and feel superb. From the top, inside the softly cushioned headband is a steel-sprung core that Beyerdynamic says is tuned to give exactly the right amount of clamping force, regardless of your headsize.

Moving down, the metal yokes feature a series of tiny indents that locate securely as you adjust them for reach, making it easy to keep the perfect fit.

The earcup casings are generous in size, easily large enough to swallow the grandest wing nuts, and the pads are gorgeous – thick squidgy memory foam enveloped in the softest grey velour. Both pads and headband are removeable for cleaning or replacing.

At the heart of the DT Pro 700 X is Beyerdynamic's brand new STELLAR.45 sound transducer, and it's this that enables these cans to sound pro, while retaining their mid-market pricing. It features a high grade neodymian magnet and a three-layer diaphragm with a coil wound from extremely lightweight, copper-clad wire. A wide frequency response of 5 to 40,000 Hz provides significant headroom.

Beyerdynamic's claims that there is an excellent trade-off between the electrical conductivity and the density of the wire used, which enables the coil to be extremely responsive whilst boasting a relatively low impedance figure of 48 ohms.

As the wire is finer, a longer length can be wound, allowing for an overhang coil design that's sensitive to the full range of magnetic flux. This gives the coil the oomph to push the diaphragm further, which results in a higher maximum SPL level before distortion is noticeable.

In a nutshell, all this clever techy stuff gives the DT Pro 700 X plenty of headroom, together with an accurate, detailed response and very high SPL levels with low harmonic distortion.

That impedance figure is important and, when you consider who these headphones are aimed at, it's clearly not been arrived at by chance. Pro headphones usually have high impedance ratings, perhaps 200 Ohms, to make them compatible with powerful headphone amps and high-end studio gear. The problem is, when you plug your expensive pro headphones into a phone or any other lowly piece of consumer electronics, the impedance mismatch will be so great that they will sound feeble. However, a rating of 48 ohms will work well across the board.

Putting them on feels great, if a bit weighty at 350g. Fit is excellent, with the pads sealing securely around the ears, blocking all but the loudest external sounds and preventing leaks. The soundstage is focussed, but not unnaturally so. As closed-back cans, they're designed for recording, tracking and so on, but if you need something more airy for mastering and mixing, the similar open-back DT 900 Pro Xs are an option.

Listening to our reference tracks, I'm struck by the accuracy of the DT 700 Pro X. They're not forthright in any particular area (bass can be a problem in a closed-back design) instead dishing up a nice balance.

If that sounds dull, it's not. The resulting sound is highly detailed, every element rendered distinctly.

Whether you're at home, or in a high-end studio, the DT 700 Pro X will give you all the precision you'll need. A joy to use. FM

FM VERDICT

8.9

Superb for studio duties where isolation is required. They're also versatile enough for location sound or even just listening to music

THE PROS & CONS

+

Accurate, detailed listening experience with low distortion

Very comfy design with great isolation

Extremely versatile. The moderate 48 ohms impedance rating means they won't require a headphone amp

–

Weighty

PreSonus R80 V2

£666 per pair

Lusting after some 8" monitors? **Simon Fellows** cocks an inquisitive ear at the revised R80 V2

CONTACT **WHO:** PreSonus **WEB:** presonus.com **KEY FEATURES** 8" Woven composite LF Driver; 6.8 in2 (4400 mm2) AMT HF Driver; **LF AMPLIFIER:** Class A/B, 75W; **HF AMPLIFIER:** Class A/B, 65W, **Peak SPL at 1m:** 107 dB. **Frequency response:** 40 Hz – 22 kHz. **DIMENSIONS:** 241 x 379 x 309mm **WEIGHT:** 9kg per unit

PreSonus' original R80 near-field active monitor was hardly long in the tooth, but the Baton Rouge-based brand (now owned by Fender) obviously thought it was high time for an update. Not that we're complaining, their engineers have made some very welcome changes.

The R80 originally caught our attention because of its unusual, rather eye-catching, ribbon-based tweeter technology. It's not unique by any means – Genelec has toyed with this kind of tweeter design, and Adam Audio uses it a lot – but not common.

The new R80 V2 has continued the ribbon tradition, but before we look at the whys and wherefores let's get a handle on what else remains the same and what's been shipped out.

Weighing in at about 20lbs each, and measuring well over a foot high, and almost as deep, these monitors are quite a lump, but they'll comfortably sit on, or around, a typical studio desk – just. I mention this early on because the character of these monitors, together with the improvements that PreSonus have made, makes them attractive for home studio/small studio use.

Other than that intriguing gold ribbon, there's not much to see. A letterbox-shaped port sits below the 8" custom-woven composite woofer but, besides the fact it no longer sports a blue trim panel, this new version looks very similar to the original. Which isn't a bad thing.

Round the back though, some significant changes have been made. Where the R80 had relatively basic preset-based EQ controls, the V2 now has high-frequency and mid-frequency rotary dials, plus a low cut-off multi-switch.

There's also a revised implementation of PreSonus' Acoustic Space Control, which cuts frequencies below 800Hz by either -4 dB or -2 dB to compensate for the bass boost that occurs when a speaker is placed near a wall or in a corner. Handy if the room you're working in is not acoustically perfect.

On to that curious-looking tweeter. It's an Air Motion Transformer (AMT), to give it its proper name, all 6.8 square inches of it. Essentially, it's a pleated ribbon transducer, a form of driver renowned for being able to accurately reproduce higher frequencies. Some of these highs go beyond the range of our hearing, but they're said to imbue airiness.

AMTs have several other useful qualities too. The increased headroom they provide makes the monitors in which they're installed less likely to exhibit distortion, and their very fine membranes, in this case 0.01mm folded Kapton, make them extremely responsive. Because of this, they're much loved for their smoothness and sonic clarity.

AMTs also benefit from a much broader projection area than traditional tweeter designs. With the R8 V2, this is much more pronounced in the horizontal plane, which in theory should result in a wide sweet spot with focused vertical dispersion, ie, fewer reflections from your ceiling, desk and floor but a wider, more accurate listening area.

Combine these characteristics with the front-ported R80 V2's new EQ controls and you've got monitors that can be fine-tuned to suit the acoustic characteristics of small or troublesome rooms – ie, most home studios. They can't magically turn a poor room into something that sounds truly outstanding, but they do offer more promise than most.

OK, how do they really sound? With all that control, setup took a while, but it was a rewarding process. Certainly, less frustrating than trying to coax a good sound from monitors where you have next to no control.

As you'd expect, bass delivery is excellent, tight and not at all flabby – I suspect the 8" drivers will negate the need for a sub in most setups. Mids are balanced, articulate and punchy, yet not aggressively so. But what about that promised clarity and airiness in the top end?

Well, if there is a difference it is a subtle one. Yes, there's a palpable sense of spaciousness evident with the R80 V2. There's also purity, precision, and most importantly, detail. The listening experience is subtle because, well, that's what we're listening for – subtleties. Anything more wouldn't have been a true representation, which isn't a good trait for a studio monitor. FM

FM VERDICT

8.0

A solid performer that, with its unusual AMT tweeter, excels at revealing nuances. Also a good monitoring choice for difficult spaces

THE PROS & CONS

+

AMT driver adds a spacious dimension to the top end

Extensive EQ controls make setup in poor rooms straightforward

Exhibits clarity and coherence

–

Maybe too pricey for some home users

Some ears may prefer more traditional tweeters

Boss SY-200 £299

Boss' latest compact synth pedal promises a plug-and-play ethos, **Simon Arblaster** whips out the ol' six-string to see if it can deliver

CONTACT **WHO:** Boss **WEB:** boss.info **KEY FEATURES** Two-button synthesiser effects pedal, featuring an effects loop, 3.5mm MIDI and USB connectivity with assignable external control

Boss have never shied away from crossing the great synth/guitar divide. For decades, their parent company, Roland, have tinkered with the guitar as an expressive tool for synths by providing an ever-evolving roster of pedals and pickups to help guitar folk tap into the wizardry of synthesis. And while Boss' own history may not be as vast, they launched the SYB-3 Bass Synthesiser a whole 25 years ago.

Now Boss have launched the SY-200, the latest pedal in their twin-button collection, replacing the now-defunct twin format of the 20 range. The -200 range offers far greater functionality to your classic single-stompbox design, with many features borrowed from the larger -300 range.

Onboard the SY-200 are 12 synth-types, each with up to 30 variations giving you a total of 171 tones to play with. On top of this, you are treated to three tweakable parameters per type: depth, tone and resonance. Further to the tone-shaping controls, there is an encoder dedicated to the presets. This and controls for the effect and depth levels are accessible via eight rotaries adorning the metal housing.

The pedal offers the latest in Boss' polyphonic synth technology and delivers on its promise of near-zero latency: it's certainly not discernible while playing, that's for sure. While designed for both guitar and bass, we feel its real strength lies in the polyphonic tracking which is near faultless, so you're better off leaving it in Guitar mode.

We like the fact that there is no menu-diving, but then this is offset by the fact that there is little depth of control with the SY-200. Sure you get three parameters per sound to play with, but we wouldn't have minded a sub-layer of control if only to get into controlling the oscillators. That said, the lack of depth certainly does not detract from the pedal's uses and overall fun factor. It inspires you to explore different playing styles and the analogue-style tone set offers a wide sonic palette making it an almost indispensable stompbox for any guitarist who wants to expand their sound. Plus, it's far easier to dial in your own sounds from the control set available and you are treated to 128 memory slots to save them into.

The send/return sockets are perfect for experimenting with adding different effects into the loop, especially distortion, as well as integration into an existing setup. The same goes for the two control inputs. You've got plenty of options to add more expression with external pedals or even sequencers. This nearly makes up for the distinct lack of modulation onboard the SY-200, but not quite.

Whilst clearly designed for stringed instruments of the electrical variety, we couldn't resist plugging some synths and beats into the SY-200 and the results were positive. Some tones worked better on beats than others, likewise for thickening up those synth patches, and there is much fun to be had with adding it into a reverb loop too.

The SY-200 is pitched as a more plug-and-play pedal and on the subject of immediacy, it delivers. Being designed for both guitar and bass via switchable modes almost doubles its value for us, especially when you include its use on other instruments. However, if you want deeper options, including onboard modulation, then you'll have to stump the extra bunce for the SY-300. FM

THE PROS & CONS

+

Small footprint

Polyphonic with near-zero latency

Plenty of connectivity options

–

Not very deep controls

Not enough onboard modulation

FM VERDICT

9.2

While the synth engine isn't open for deeper tinkering, the SY-200 delivers in the fun stakes, with an adaptable tonal palette

Sennheiser HD 400 Pro £219

Open-back cans developed for long mixing sessions in the studio. **Simon Fellows** goes Pro

CONTACT **WHO:** Sennheiser **WEB:** en-uk.sennheiser.com **KEY FEATURES** High-end, open-back headphones with a transparency ideal for critical listening situations

If Special Forces operatives were issued with headphones we'd like to imagine they'd look just like these HD 400 Pros. Silky black from bottom of cup to top of headband, there's zero bling on show here – no chrome surrounds, no shiny plastic panels or brushed stainless steel inserts to catch the eye.

Even the small Sennheiser script on the headband and tiny logos on the grilles are black on black. So, in the unlikely event you find yourself in a tactical mix operation, way behind enemy lines, you'll feel right at home wearing these!

Outwardly, their design is at least a decade old, following exactly the same form factor as the cans in Sennheiser's HD 500 series. Nevertheless, it's an iconic look, characterised by beautiful, flowing organic curves and those distinctive arms that dog-leg around the ear cups. Those cups are quite restricted in both tilt and swivel, but not to the degree that it becomes an issue.

The mildly sprung headband conformed to a variety of head sizes, clamping small heads with just enough pressure, but not so tight on larger noggins that they become uncomfortable. Similarly, all manner of ears were comfortably enveloped in Sennheiser's soft, velour upholstered ear cups. Weighing just 240g, these plush headphones are more than comfortable enough to make short work of long hours at the mixing desk.

Closed-back headphones get a bad rap for accentuating bass frequencies, simply because there's nowhere for the air pressure to escape. True to form, these open-back Sennheiser's perform superbly in this respect. The liberated airflow also delivers a more spacious, airy and, dare I say, realistic soundstage. Just be aware that isolation is poor, as is to be expected.

Another lovely benefit is that these open cans deliver huge wafts of cooling air to your lugholes, taking comfort levels up another notch. Sweaty, vinyl-cushioned closed-back headphones in the height of summer? No thanks!

Sennheiser is particularly proud of the 120 Ohm transducer installed in each ear cup. According to its engineers, the "drive magnet offers high power, while its dampening system manages ventilation" resulting in deeper bass while mitigating any distortion that will impact clarity. Those clever engineers have also angled the transducers in order to simulate the position of high-end monitors in a studio.

Certainly, the frequency response is impressive – from 6Hz to 38kHz – so much so that the bass reaches deeper than the scope of human hearing (roughly 20Hz to 20kHz), and it's a similar story at the top end. Although we can't hear some of these highs and lows, it's quite possible that we can feel them, qualities that help to give us a sense of precision and airiness.

Take any of these features or characteristics in isolation – the open backs, the angled transducers, the wide frequency response or the neutrality – and it's unlikely they will make that much of an impression. Bundle them together in a smart, well-built set of cans though, and we believe Sennheiser has succeeded in what it set out to do.

Listening to a variety of music with the HD 400 Pros, everything from Floating Points to Frank Zappa, Masked Wolf to Mozart, there's an apparent richness, a complexity that lesser headphones just don't convey. There's clarity and balance aplenty too, but not the cold, hard treble-toppy steeliness that's often mistaken for transparency. Instead, there's a measured vividness; an equality where the mids, lows and highs co-exist without fighting one another. Yep, they sound pretty good!

Some headphones do little for your mix beyond keeping your ears warm, but Sennheiser's HD 400 Pros will provide you with a level of clarity, spaciousness and honesty that you can properly base creative judgements on.

Now you can find comfort in the truth, even if the truth doesn't always make for comfortable listening. FM

FM VERDICT

9.1

These stealthy-looking headphones, with their open-back design and wide frequency response, deliver earfuls of accuracy

THE PROS & CONS

+

Rich yet accurate listening experience

Wide frequency response

Very comfortable

–

Not cheap

Erica Synths Black K-Phaser £190

Rob Redman gives Erica Synths a round of applause for reminding us what's great about phasers

CONTACT **WHO:** Erica Synths **WEB:** ericasynths.lv **KEY FEATURES** **I/O:** 8 all pass filters, Built in LFO, Resonance control, Detune/spread

The phaser is one of those modules that gets less attention than it deserves but Erica Synths have decided to give it some love, in the form of the Black K-Phaser.

This latest addition to the Black series modules packs a lot of tone into its 10hp and shares the same design ethos, with a black fascia with jellyfish graphics. Unlike some modules out there with graphics, the Erica Synths designs are always subtle, leaving the control labels clearer to see. The panel is dominated by the large Phase knob, which gives direct manual control over the phase position, although most users will undoubtedly use CV for this. CV can be applied directly to the phase itself, or to the inbuilt LFO which can be fine-tuned with the attenuverter. The LFO is switchable between ramp and triangle wave shapes. It'd be nice to see some extra options here but if two were to be chosen these are the most useful. One welcome feature here is that the LFO can be output separately, so this can add some extra modulation to other parts of your rig or patch, keeping time with the phaser. I wish more modules offered this, as it helps keep a patch clocked with menial cable clutter. The rates of the LFO are as important for a phaser as any other use, so it's good to see a really broad range, allowing the Black K to run from almost imperceptibly slow to mind bogglingly fast. So no matter what your patch needs are, it will cater to them.

Similarly, there is a wet output, enabling the output to be sent elsewhere for further processing, while the main output can continue on its way. This adds some extra versatility to the tones that the Black K-Phaser produces.

When it comes to these tones, they really are juicy, for want of a better word. I'm a big fan of phasers, as they can add anything from subtle movement to wild jet scream effects to a more static sound. This particular model adds more than most, with a resonance attenuverter control and a detune, here labelled as spread. This detune acts on the eight filters that make up the phaser and it sounds wonderfully rich, although not thick in the same way detuned oscillators do. It feels more like detuned harmonics and it adds a textural element that isn't too in your face but has a definite impact on the output.

The Black K-Phaser retains the classic tones you'd expect from a module of this nature, while adding extra character and useful controls and outputs to an already good value and solidly built device. **FM**

THE PROS & CONS

+

Wide rate range

Plenty of CV control

Good value

–

Limited LFO shapes

FM VERDICT

8.0

For bringing your synth tones to life with rich phasing, the Black K-Phaser is a great option – and it's a good modulation source too

PAPER POWER

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paper packaging in Europe comes from renewable sources.

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LOVE PAPER

Source: Confederation of European Paper Industries (CEPI), 2018
CEPI represents 92% of European pulp and paper production

Austrian Audio OD505 £229

Jon Musgrave gets up close with this new handheld vocal microphone from Austrian Audio

CONTACT **WHO:** Austrian Audio **WEB:** austrian.audio **KEY FEATURES** **CAPSULE:** Dynamic **POLAR PATTERN:** Supercardioid **POWER:** 48V phantom **FREQUENCY RANGE:** 35Hz to 16kHz **SENSITIVITY:** 4.4mV/Pa **IMPEDANCE:** 275ohms **MAX SPL:** 154 dB SPL **LOW-CUT FILTER:** 120Hz, 12dB/octave **DIMENSIONS:** 194 x 53mm **WEIGHT:** 340g

Over the past couple of years Austrian Audio has impressed me with some great products and consistent attention to detail. For their latest venture they've turned their attention to the humble handheld dynamic vocal mic. As we know, handheld vocal mics combine low handling noise with robust construction and are ideal for stage use. However, self-noise and low sensitivity can hamper their overall fidelity. Austrian Audio's solution is to combine a dynamic capsule design with a phantom-powered active stage, in what they call 'the best of two worlds'. The result is the OD505, an active dynamic mic that's stage robust and almost as sensitive as a condenser.

The mic is one of the larger handhelds I've tried and this is partly down to the reasonably large headstock which joins the body via three mounting arms. This means you actually have some air behind the headstock. The capsule itself is a dual design with active front capsule and passive lower capsule and this combined with the mounting system above reduces handling noise. At the bottom of the body you'll also find a switchable 12dB/octave high-pass (120Hz) filter, which helps reduce rumble and proximity. Rounding things off, the mic gets a suitably large zip-up padded case complete with Austrian Audio mic clip. I guess you could view the mounted headstock design as a potential physical weakness, but the mounting arms are all part of the mic's die-cast body and feel pretty robust. Either way, the black finish with red detail is in keeping with Austrian Audio's branding and looks very slick.

> Fidelity is good, it has plenty of air and isn't dominated by the upper mids

As you would expect, with the mic powered up you get a pretty healthy output, and although at 4.4mV/Pa it's clearly not as sensitive as a typical condenser, you're not hunting the upper reaches of the mic pre gain to get a decent level, which is reassuring. Unsurprisingly, the handling noise is low and the supercardioid pickup pattern pretty tight. Indeed the rear rejection is also very impressive.

With handheld vocal dynamics there's a tendency for performers to get right in on the capsule grille, so it's always interesting to see how different mics cope with this. Although there's a clear loss in fidelity when right on the grille, the OD505 handles this very well. In fact, the capsule has something called a 3D Pop Noise Diffuser, which does a good job of handling plosives. You've also got the 120Hz low cut which can be helpful. For vocal use I think the mic delivers its best fidelity and minimal plosives with the 120Hz filter engaged and the performer a couple of centimetres from the grille. Used in this way the mic fidelity is pretty good, it has plenty of air and isn't dominated by the upper mids as some vocal dynamics can be. Of course, there's nothing to stop you using the OD505 on instruments, and although the size might not make it a first choice for drums, it delivered for me a pretty decent rock acoustic guitar sound.

A few handheld dynamic mics dominate the market. Austrian Audio have side-stepped these by delivering a phantom-powered dynamic mic with healthy output level and decent features and I'm sure it'll find a suitable fanbase. FM

FM VERDICT

9.0

Launching a new handheld dynamic mic is brave, but the OD505 has some nifty features that'll help it gain the recognition it deserves

THE PROS & CONS

+

Low handling noise

Healthy output level

Good control of plosives

Optional low-cut filter so you can choose required frequency response

Luxury carry case

–

Quite large

UVI – Emulation 2+

€199

E-mu Systems are sadly no longer around, but their legacy lives on in the numerous tracks on which their gear can be heard. While they began in the analogue realm – with co-founder Dave Rossum instrumental in designing a range of classic synthesiser chips – it was in the world of digital sampling that E-mu really made their mark. Although by no means cheap, their Emulator and Emulator II allowed the, then new, sampling technology to be embraced by those who couldn't afford high-end systems like the Fairlight CMI. Their success ultimately expanded to drum machines and other related kit.

Although later machines employed very high-quality playback, it was the limitations (particularly bit-depth and sample-rate) of some of their earlier forays that has come to define their sound and ultimate legacy.

UVI's Emulations 2+ aims to capture some of this magic, while adding some new features. The usual UVI approach of recording presets, classic sounds and newly-created content is once again followed here, and takes in the original Emulator I, II and III keyboards as well as the SP-12 drum sampler and Drumulator. UVI have in fact covered some of this gear before, but the content and functionality is massively expanded (with a huge array of new drum samples and the highly regarded OMI sample libraries and alternative Oberheim DPX-1 versions).

Another worthy addition is the multi mode, where four Emulation instances plus the Drumulation engine can be combined with effects. Here the use of a Scale Quantizer and Chord Detector (as found in the Quadra engine) make for some very sophisticated sequencing and playback options.

It would have been good to have a little more info about the original source of each sound, and like for UVI's Quadra instruments, the loading time for presets can be slow. Overall though this is a comprehensive set of instruments that deliver that classic E-mu sound. ***Bruce Aisher***

uvi.net

VERDICT 8.8

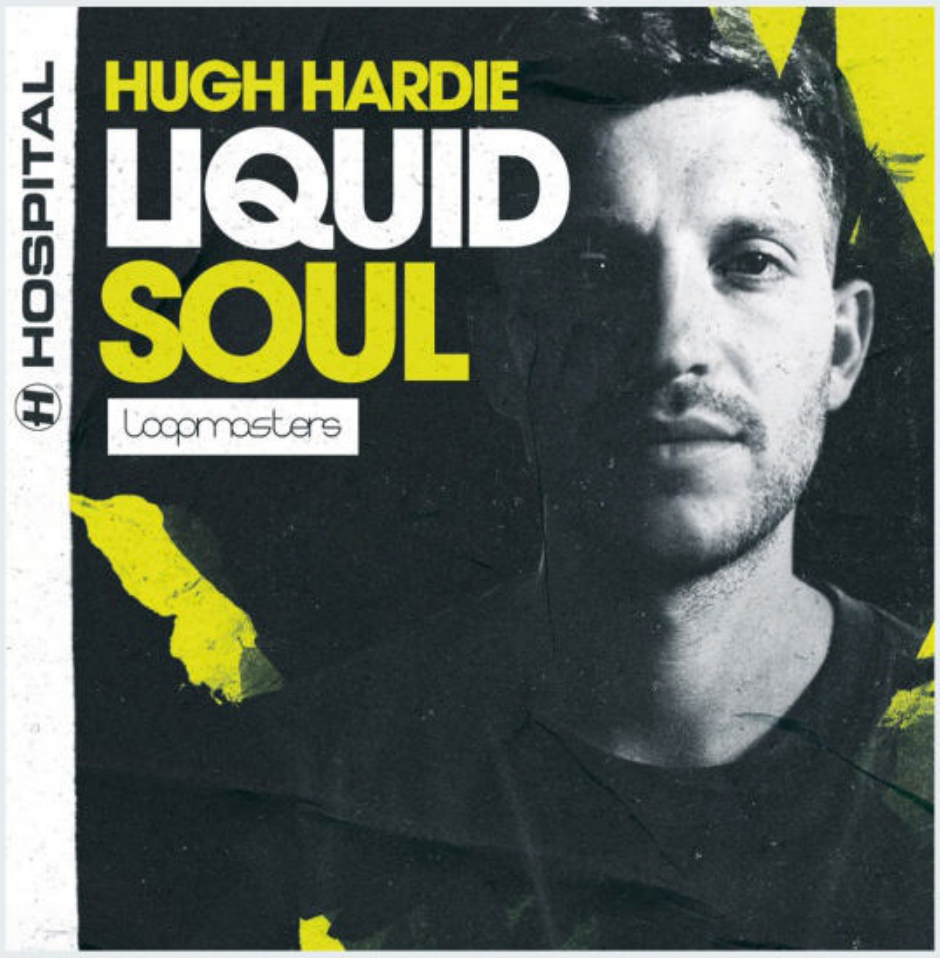
UVI – Quadra – Metal and Wood €149

UVI are back for another instalment of their Quadra 'multi-instrument and sequence designer' story. As the name suggests, the sound engine is based around the layering of instruments, and this time it's metal and wooden sources that provide the raw content. This takes in keyboards, bells, gongs, mallet instruments and well as drums and synths. On their own these are excellent, playable sounds, but when extruded through the Quadra engine become complex, multi-layered sequences. The quality of presets is excellent and the interface and programming options are also strong. However, perhaps due to this complexity, loading time for presets is slow. Even though all content was stored on a very fast SSD drive, preset browsing was laggy, and therefore sadly somewhat of a vibe killer. Hopefully this will be addressed in a future update. ***Bruce Aisher***

uvi.net

VERDICT 8.0

Loopmasters Hugh Hardie – Liquid Soul £30



Hospital Records' own master of the dreamy DnB gets let loose on his first ever sample pack, and it's a keeper.

Jazzed up pads, riffs and plaintive pianos meet live and organic hat sounds, dynamic snares and a wide range of his signature kicks, which come in tight and punchy, loose and lumpy, and everything between.

The breaks have great groove and tone, too, with nods to some classic-sounding drum patterns and styles thrown in.

The basslines hold everything down, as you'd hope. With double-bass-like playing hanging happily next to raging and rolling subs, and other deftly designed dancefloor dangerousness.

51 soft sampler patches top the pack off, with the 22 MIDI files a final cherry on top.

Roy Spencer

loopmasters.com

VERDICT **9.0**

Four4 – Electro

From $7.99/month

The mid-'80s electro era gets a polish for the modern dancefloor, to great effect, on this popping (and locking) sample set.

Ringing claps and shiny synths strut atop some serious bottom-end business, with all those retro-styled beats, robot riffs, and acidy squeaks and wiggles, sounding fresher than ever. There are also hints reminiscent of the seminal electro compilation here, early Detroit influences, and stylings you'd find among the beats of contemporary experimenters in that sound, like AUX88. These one-shots, loops and presets make for a booming collection of updated street sounds, evoking boomboxes, The Worm, and more, with a modern production twist. *Roy Spencer*

splice.com

VERDICT **8.0**

Sample Magic – Midnight Electronica

From $7.99/month

More late-night layers for bedroom producers on this super-chilled pack of loops and samples. There's plenty to toy with, as a cool cast of fuzzy basslines, loose shakers, and trappy claps welcome you in. The tone swings between bittersweet melancholy melodies, dented grooves and warped vocals, with lo-fi chords coming next, alongside pitched, breathy pad sounds, and moody synth work. Rounding out the session are super versatile presets, useful beatmaker kits and MIDI files. If you're burning the midnight oil making indie electronica, downtempo, or alt R&B, let this little lot take you 'till dawn. *Roy Spencer*

splice.com

VERDICT **7.0**

Kittball Records – Tube & Berger Signature Sounds

£19.95

Kittball Records kicks off its first ever pack in style, enlisting the label's co-founders to lift the lid on the samples that make their tech house tracks bang. There are slick dance beats, jumping basslines and moody retro licks galore. Most fun are the tough drums, with all the track-thrilling beats and pieces broken down into different styles of fizzy hats, strong tom loops, vicious snares, shakers and some mighty clean claps. Plus a decent batch of room-filling bass bumps and some solid and stylin' synth grooves, all in glorious 24-bit WAV quality. *Roy Spencer*

loopmasters.com

VERDICT **8.0**

Audiotent – Realm

£37

Wanna touch ground on a (b)rave new world of tech house samples? It's a loopy land, with an abundance of basslines, built from the boots up, to suit any palette, each one demanding to be noticed, and determined to fit into any future club-troubling tracks you're eyeballing. Drum-wise, these really do knock. Devastating off-the-peg, or pulled apart to reveal their layers – allowing each one of them to realise its maximum potential, as it joins your ranks. The pads, chords, and atmospheres kick up a stink, too, providing a faint whiff of mood, or a full-on sensory overload of tone and texture as you freak and tweak 'em to your heart's delight. In short, go explore. *Roy Spencer*

audiotent.com

VERDICT **9.0**

PSPaudioware Saturator

PSP Saturator is designed to add warmth, drive and grit to sounds through analogue emulation. It includes eight saturation shapes for varying tonality, three signal-sculpting engines, band processing, a parallel mix function that includes automatic phase alignment, as well as a signal meter mode and more processing tools like sidechain integration. The plugin's different saturation shapes can greatly alter tonal quality, and with PSP Saturator's extensive mixing tools, there are plenty of ways of giving analogue life to sounds, from adding high presence with the Ram algorithm, filters for frequency control, to using its detailed meters for gain staging, as well as multiple tailored presets.

Valve saturation >

Firstly, let's look at how we can use the different saturation shapes and how they change the sound. The first three shapes are soft, medium and hard valves. Whether the tonality they add to the sound is softer or heavier depends on the type of valve we dial in. If we want to subtly add warmth to the midrange, we can choose the soft or medium tubes, depending on the saturation amount and frequency. The hard valve setting allows us to heavily drive the sound, and at higher amounts of saturation adds more harmonics to the mid and higher frequencies.

Tape saturation >

Next are tape-style saturation shapes. These are similar to the tube shapes, but with a noticeable harmonic difference. If we set it to warm tape and increase the saturation on something like a low sub bass, we can hear that it adds more high harmonic content to the sound than the tube settings, and with modern tape we achieve different tonality. Saturating at a higher frequency, we can really add a lot of harmonics to a low-range sound up to 3kHz, using dry/wet for a subtle effect.

Ram >

The next saturation shape is the Ram, which adds an almost amp or fuzz drive-like sound. Whereas other shapes add warmth to lower frequencies, by using the Ram shape we bring out higher frequencies from a low sound to match lower register levels. This is great if we want to make a low sub bass more prominent in a mix, going from a sound that can only be heard on headphones or good response speakers, to one that can be picked up even on phone speakers.

< Clip saturation

Next up are the clip saturation shapes. Let's see what happens when we apply it to our master channel. Driving the source sound with saturation, boosting the harmonics and overall volume of a sound, the two different types can help us to shave off any volume that passes the maximum threshold, and adds those excess peaks back into the mix as harmonic distortion and saturation, tidying up our mix and adding more harmonic content. Soft clip will attenuate the peaks, while the hard clipper will simply shave off everything that passes the threshold.

SHAPES OF SATURATION

Taking a closer look at the eight saturation shapes, we can try to decide which form will best fit the type of effect that we want to achieve with PSP Saturator. Saturating plugins are traditionally used to bring out harmonics based on the frequencies of the source sounds. Originally, when engineers started using studio hardware saturators, different saturators would be used depending on the situation, as the way the sound changed depended on the idiosyncrasies of each circuit in any given unit. With this, we're able to use this software in the same way engineers might choose a piece of hardware for character.

< Further processing options

Now we've taken a look at what can be done with the saturation shapes, let's think about further shaping and taming sounds. Near the bottom right of the UI, clicking Open reveals the bottom panel. From here we can do a few things to control the sound further, such as turning on the Fatx4 mode for extra drive, adding makeup gain, smoothing the saturator or using the high-pass filter to remove the saturated low-end signal.

High and low range algorithms >

Another way we can saturate sound with more precision is to use the High and Low Range algorithms, which let us saturate specific frequencies. Each algorithm has a dial for specific frequencies, with a control for warmth on the lows that lets us subtly drive a specific range, and a control for softness that can be applied to the highs. To affect just one range, we can also toggle each range on/off. We can also set the level of each range for more control.

< Controlling the mix

Now we know how the shapes and frequency algorithms can help us drive harmonics in various ways depending on the needs of the track, we can use the visual meter display and mix settings to gainstage the sound. This allows us to add harmonic content to boost the perceived loudness of what's affected, without actually increasing the gain of the channel. If we look at where the sound hits with the plugin bypassed and introduce the saturation to taste, we're able to hit the same decibel level while making the source sound more full overall. FM

Teenage Engineering OP-1 £1,399

A decade later, how does the game-changing OP-1 fair today? **Tefty** checks in

CONTACT **WHO:** Teenage Engineering **WEB:** teenage.engineering

The OP-1 from Teenage Engineering dropped in 2011 and went on to take the hipster music production world by storm. It was a unique, quirky, and yet somehow intuitive way to make music in an extremely portable format.

Fast forward to 2022 and we have many options on the market that offer quirky, portable music production experiences. I've been using the OP-1 for three years now and it's been a mix of exciting creativity, annoying limitations, and happy accidents.

So what is the OP-1?

It's a synth, sampler, MIDI controller, and 4-track recorder all in a small, highly portable setup. It's got 13 synth engines, seven effects, a mic, and can even act as an audio interface via a recent update. (Yep, it's still receiving regular updates!)

As a sound module, the OP-1 is an instant creativity hack. Most modern synths today offer you the usual signal choices and synthesis. The OP-1 takes an abstract approach and offers you only four macros for each sound engine to "design" the sound.

With each engine, you get a creative window into a visualiser that honestly doesn't tell you much, other than that cool things are happening. As you play the keyboard and twist macro knobs, the layout and visual feedback forces you to let go of traditional thoughts of sound design and just listen to what's happening.

Out of all the synths I own, the OP-1 is the only one that can instantly get me outside of my head for creativity. Not to say it's a superior method, it's just different, which can be the perfect remedy for a creative rut.

THE 4-TRACK TAPE MACHINE

Another oddity to the OP-1 magic is its 4-track tape machine. Most modern grooveboxes/production boxes offer MIDI tracks first, and then audio tracks. The OP-1 skips the MIDI and goes straight to an audio-based workflow. This provides some interesting choices that have to be made when crafting beats, much like 4-track recorders from the pure analogue days.

For instance, when recording, there is no quantising. This adds a human element to the playing, but you also need to make sure you don't mess it up! There's no undo button and you can overdub on top of a track and permanently change it. There are ways around the undo. You can make copies of sections of audio and drop them down the timeline of the virtual tape machine. But alas, it's a quirky design.

If you're willing to plan and write around the 4-track limitations, it can be an excellent way to write ideas. And afterwards you can import the four audio tracks into your DAW for further processing/mixing/finishing.

If you know exactly what you want to create, sonically, then I think the OP-1 can be a rough choice. But It really does excel as a creative spark machine.

> "Of all the synths I own, it's the only one that instantly gets me out of my head"

The layout

The macro knobs for the synth engines are a key aspect of the OP-1's creative flint. The four macro knobs are used throughout the pages and features of the synth. For instance, the ADSR envelope, various effects pages, LFO settings, the 4-track mixer and master EQ, all rely on the four macro knobs.

The entire unit has a slick, easy to understand, design about it that tricks you into thinking it's a toy. But underneath the surface is a ton of complexity and a workflow that demands you pay attention to what you're recording.

The OP-1 has tons of shortcuts, and they can be hard to remember at first. Learning these shortcuts, like all synths, is very important for using the OP-1 to its full potential.

What I wish it had...

After years of use, there are a handful of things that I wish it had acquired along the way. For starters, that undo button would've been nice. Yes, you can lift your current audio into the buffer, but when you've been away from the OP-1 and come back to it with a fresh perspective, you can easily forget about those "gotcha" moments.

Even though the effects are decent, I wish the reverb would've been expanded/updated. It's basically a spring reverb for the master buss, and a spring for the synth effects. It has a very distinct flavour to it and I find myself not using it most of the time, which is a shame. I'd love to craft some desert wasteland washed out ambient tracks on the OP-1, but I need some long lush reverbs.

Lastly, I wish it had an actual MIDI sequencer that I could use for recording. While I appreciate the audio-based workflow for recording, there are a lot of times I wish I could record ideas via MIDI and then tweak sounds/change synths to dial in the sounds better.

That being said, the OP-1 is still a unique portable audio workstation even in 2022. Teenage Engineering really did an amazing job with their first synth. FM

FM VERDICT

VALUE

BUILD

LONGEVITY

USEFULNESS

OVERALL

8.2

Still an excellent portable synth for sparking ideas... but look elsewhere for full sound design options

THE PROS & CONS

+

Highly creative, unique approach

The four-knob concept keeps things simple for all

The tape machine is great for sampling into other devices

Still getting updates 10 years later

–

Limited for recording. Lack of MIDI recording can be annoying

Needs a few more reverb algorithms

External MIDI can be a pain

A CAREER IN GEAR

Trentemøller

The Dane rummages through his full-to-bursting arsenal and tells us what gets used most

© Karen Rosetzsky

Equally comfortable dialling enchanting techno rhythms into a drum machine as he is summoning intricate melodies from a reverb-soaked guitar, Anders Trentemøller has spent most of his career exploring the darker corners of synthwave, electronica, shoegaze and post-rock, as he continues to reinvent himself as an artist.

His latest album, *Memoria*, sees the Danish producer and multi-instrumentalist digging deeper into the sound that he perfected on 2019's *Obverse* – broody guitar lines, shadowy synth tones, and cascading arpeggios – while honing his skills as a songwriter and lyricist. For our Career in Gear feature, Trentemøller selected five pieces of studio equipment that have been essential in defining his sound.

Schecter Robert Smith UltraCure VI

HEAR IT ON...

The Garden

"I love this! As a *huge* Cure fan I adore their guitar sound and this one gives me that great Fender Bass VI vibe. It's not a normal guitar but not a baritone guitar either; it's this mix between a guitar and a bass. It sounds quite crisp and sits so well in a mix. I really like to play simple, one-string parts on it. Put a chorus or flanger on this one and you're straight into The Cure and Joy Division-land! I have used it on my last four studio albums and I also bring it with me live."

Hughes AK-100

HEAR IT ON...

Church of Trees

"This is a kind of rare box from the early '80s that I use all the time for widening the stereo image. No other hardware or plugin sounds as nice as this one. It's an old box made for faking surround sound on a television, but I heard about it from my big idol and inspiration Tchad Blake in one of his excellent *Mix With The Masters* episodes.

"It does some lo-fi magic on both a stereo and mono sign and I use it nearly on every mix I do. It makes the signal sound very open, coming from outside of the speakers nearly… and it's kind of dull in a very nice way. It is a bit noisy but I don't care, maybe it rolls off some of the high frequencies if it's very obvious, but most of the time I don't. Is it mono compatible? No, and that's fine with me!"

> "I'M ADDICTED TO CHORUS, IN THE CURE/POST-ROCK WAY… ESPECIALLY ON BASS, GUITAR AND SYNTHS"

DigiTech XP-300 Space Station

HEAR IT ON...

Veil of White

"This is a crazy nice effect from the early '90s. It's a multi-effect thing. You can't turn a lot of knobs, actually there are none, only the expression pedal is changing the sound as you press it up and down. But it has a lot of cool effects that are great for both far out, bizarre sounds or more dreamy shoegaze kind of stuff.

"A lot of modern effects can sound quite similar but not usually as 'dirty' as this one. It was used a lot on my new album. All the dreamy guitar and synth parts went through this baby, all the noise and dreamy Rhodes on the opening track *Veil Of White* is this pedal! I used it more or less on every song on *Memoria*. I ran my Hohner String Melody 2 through it and then into a Boss Dimension C pedal to give it some nice lush stereo widening, a trick I used on several songs. I simply can't live without this effect on my synths and guitars."

Revox B77

HEAR IT ON...

Sleeper

"My beloved tape machine is also getting used quite often, but not as often as earlier. Now I also use a lot of the nice tape plugins out there, especially the ones that can sound like old cassette players. But mainly I'm using the Revox for glueing drums together, or adding warmth to a synth bass or real bass, or for whole mixes.

"Often the more analogue-sounding songs go through this machine. I like the vibe it brings to the mix. A nice, subtle difference that sounds warm and fat that glues the mix together in a more pleasant way than most compressors."

Effects pedals

HEAR IT ON...

Phoenicia

"I use my effect pedals all the time on everything! Not only for guitar and bass but for all kinds of stuff. I like the unique sounds you can get from messing around with them, you can make them sound as no other hardware or plugins can, especially linked. I often don't know what I'm doing but that's the fun.

"I'm addicted to chorus, used in the Cure/post-rock way… especially on bass, guitar and mono synths. Most are in my drawers, I have more than 300! It's too much, but I can't stop collecting them. Especially rare vintage Japanese ones. But they also often get used, and I know I have them if I'm ever looking for a specific sound." FM

WANT TO KNOW MORE?

Trentemøller's new album, *Memoria*, is out 11th February on In My Room

Generate new musical ideas in Ableton Live

How can I add depth to my music using Live 11?

Adding depth to your production can make a track sound bigger, breathe life into a sound or create ambience. In this example, we'll see how you can manipulate an instrument's perceived position in space to add drama. We can do this by pushing it back or forward in the mix, making it seem further away or closer.

Let's think about how we perceive distance. The further away a sound is, it becomes quieter, we hear fewer highs and there are more reflections. In a DAW, we can mimic this with audio effects. For example, to make an instrument sound further away, more time-based effects (like delays and reverbs) are applied. We can roll off high frequencies, reduce gain and widen the stereo field.

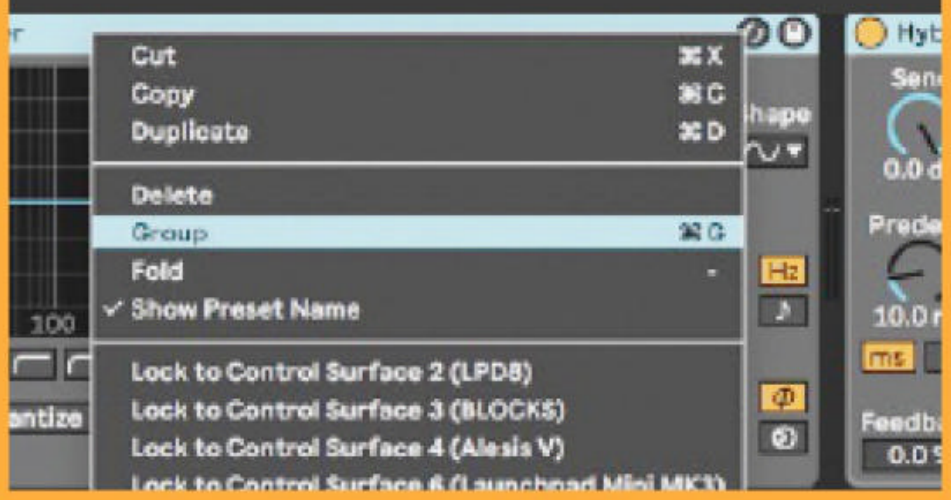
We can use macros to vary an instrument's sense of depth. Start by dropping a Hybrid Reverb, Echo, Utility and an Auto Filter onto a track. Next, group the effects to make an Audio Effect Rack. We'll map various parameters to one macro knob before fine-tuning macro mappings. By the end, you get a bespoke dimension expander! Automate this effect subtly on single tracks or place it on a bus or master track for vibey breakdowns.

ABOUT THE AUTHOR

Mel Uye-Parker is a Nigerian/English producer, performer and educator. As a vocalist and writer, she has collaborated with Matthew Herbert, Rae & Christian, Yesking and more recently, produces under the moniker, MJIRI. **meluyeparker.com**

01

Choose the instrument that you want to bring to life and place a Utility, Auto Filter, Hybrid Reverb, Echo onto its track. Now, shift-select each device, right click and group the effects into an Audio Effect Rack.



02

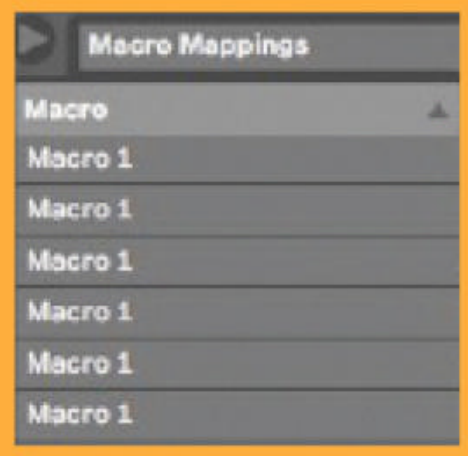
Toggle the Show/Hide Macro Controls button in order to reveal the Macro controls. Press the minus button to show fewer controls (we only need one!) and rename the knob to Back >> Front.

03

By right-clicking respective parameters and selecting 'Map to Macro 1', map Auto Filter's frequency, Utility's Gain and Width, Hybrid Reverb and Echo's Dry/Wet and Stereo Width.

04

We'll reserve the left side of the Macro knob for 'back of the mix' and the right side for 'front of the mix'. The left side should be mainly wet, so 'invert ranges' to switch the mappings around – you should invert Utility Width, Reverb and Echo's Dry/Wet and Stereo Width. You should also limit the ranges here to control the depth effect. Have a look at these ranges but adapt to your taste.



Name	Min	Max
Stereo Width	400 %	0.0 %
Gain	0.00 dB	2.00 dB
Frequency	2.03 kHz	19.9 kHz
Stereo Width	200 %	0.0 %
Dry/Wet	40 %	0.0 %
Stereo Width	200 %	0.0 %
Dry Wet	27 %	0.0 %

HARDWARE SEQUENCERS

Korg SQ-64
£269

Full Review: FM367 | An intuitive, nostalgic and very musical bit of gear and one that should stand the test of time. Now, where did we park the Trans-Am?

Arturia KeyStep Pro £319

Full Review: FM359 For melodic sequencing duties and flexible hardware control, this is one of the best keyboard devices around.

Novation SL MkIII from £540

Full Review: FM338 Well-designed and versatile. For those who work with both hardware and software, this may be the best studio centrepiece on the market.

Pioneer DJ Toraiz Squid £467

Review: FM351 Pioneer DJ's Squid opens the door to a world of bespoke sequencing, with features like Groove Bend and speed modulation putting a new spin on your sequencing moves.

Arturia BeatStep Pro £196

Review: FM296 The BeatStep Pro is a modern classic, offering a great range of connectivity, sequencing and controller capabilities, all without breaking the bank.

DIGITAL POLYSYNTHS

Korg Modwave
£699

Full Review: FM373 | Modwave is far from the only wavetable game in town, but it sets itself apart with unique tools and a few added gimmicks.

ASM Hydrasynth £1,299

Review FM360 An impressive first release from a new brand. Hydrasynth looks and sounds great, invites exploration, is built to last and is hugely expressive. What's not to like?

Korg Wavestate £699

Review FM353 Wavestate walks the line perfectly between paying tribute to a '90s classic and offering cutting-edge tools. A fantastic update to a much-loved synth line.

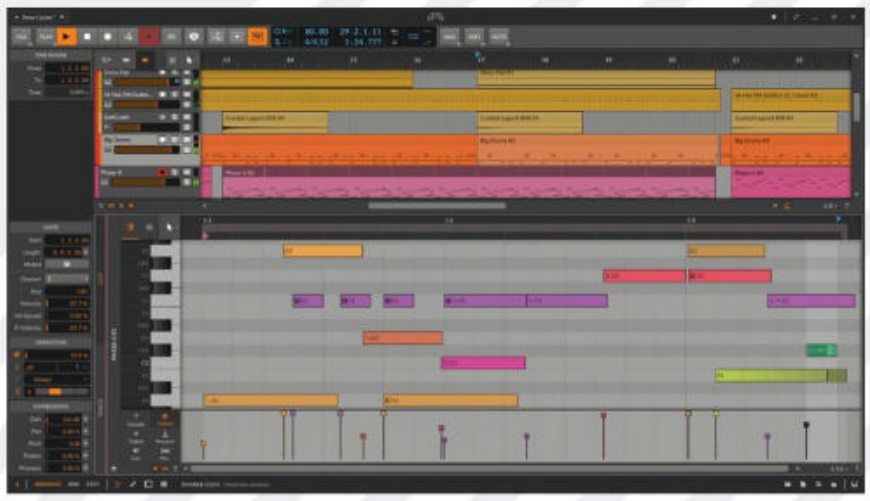
Waldorf Quantum £3,500

Review: FM336 A stunning piece of hybrid synth design – setting a new benchmark for features, interface and sonics. It's expensive, but a synth that you'll find inspiring for many years.

Korg Opsix £699

Review: FM365 Opsix is packed with unique character, and – rarely for an FM instrument – it's fun and accessible. Another top-class digital synth from Korg.

DAWS



Bitwig Studio 4

$399

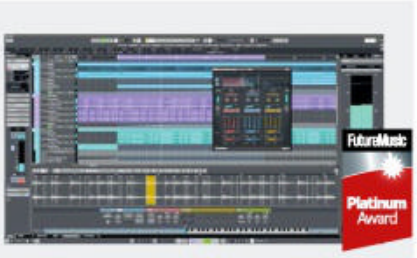
Full Review: FM373

On the whole this is the least essential update of Bitwig Studio so far, but the DAW remains one of our favourite pieces of music making software.

Ableton Live 11 Suite £539

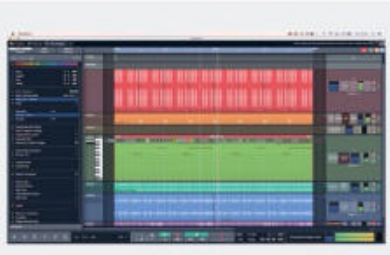
Full Review: FM368

Not an essential upgrade for everyone, but new additions, including comping, MPE and linked tracks, have been smartly done. Live retains its place at the cutting edge.



Steinberg Cubase Pro 11 £499

Review: FM366 The latest annual update to Steinberg's much-loved DAW improves sampling, refines a number of Pro features and adds a selection of fun creative tools.



Tracktion Waveform Pro from $119

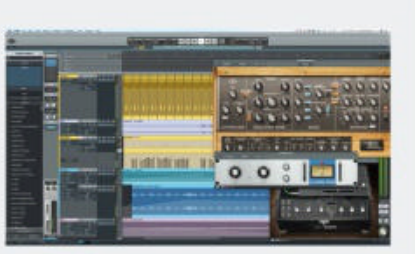
Review: FM345 Waveform is now friendlier, contains more creative tools and brings workflow ideas you'll have missed from other DAWs.

Apple Logic Pro X $199

Review: FM361 Still no Logic 11, but seeing as Pro X has had so many updates, it's hard to complain. In the latest, spatial audio tools join previous additions such as Live Loops.

Reason Studios Reason 12 £499

Review: FM375 It's debateable whether the upgrade is worth it for existing Reason 11 users, but taken as a whole Reason is looking the best it has in years.



Universal Audio LUNA free

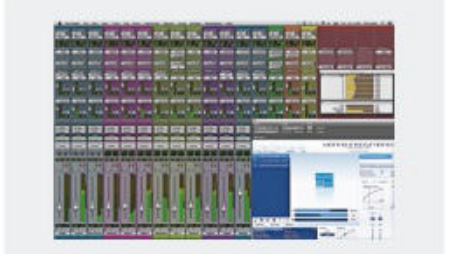
UA might not want to call LUNA a DAW, but let's be honest... Even in its version one form, this is a slick and stylish recording environment and a great freebie for Apollo users.

PreSonus Studio One 5 Pro £345

Studio One has built up quite the cult following over its decade of existence, and with good reason – this is a powerful, modern DAW.

Image-Line FL Studio 20 €89

Review: FM334 Released to celebrate its 20th anniversary, Image-Line's FL Studio 20 is a powerful and inspirational application – and it's a welcome addition to the Mac realm too!



Avid Pro Tools from £25 p/m

Pro Tools has now caught up with other DAWs, bringing in a fast workflow to match its power. It still only runs AAX plugins, and there are alternative subscription payment models.

soothe2

soothe harshness, save time

oeksound

read more at
oeksound.com

SPIFF

transient control, oek-style

ARTURIA
_The sound explorers

_PolyBrute

Analog evolves.

Introducing the free 2.0 Soundshaper update for PolyBrute: New EQ & Ensemble effects, duophonic aftertouch, enhanced LFO curve customizations, greater control over parameter accuracy and imperfection, and more...

Bend analog to your will like never before.

PolyBrute
Analog Morphing Polysynth

9001

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